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## **Annual Report 2022**

**Activities of the Wild Chimpanzee Foundation for improved conservation of chimpanzees and their habitat in West Africa**



**January 2023**

## **Summary 2022 and Outlook for 2023**

By the president of the Wild Chimpanzee Foundation, Christophe Boesch

The bad news about the environment and the biodiversity crisis have dominated the international news throughout 2022. This is depressing and shows the difficulties nations have to come to some simple agreements for the good of the planet. At the same time, it stresses the importance of Non-Governmental Organisations to counter the degradation at their own levels to ameliorate the worldwide situation. The decision of the Wild Chimpanzee Foundation (WCF) to concentrate in creating new protected areas to contribute to a reversal of the degradation of our planet has proved its value. Present-day protected areas are created with the local communities to ensure a future for new generations. This has been particularly notable in WCF's project in Guinea, where inhabitants of some villages inhabiting the north of the **Moyen-Bafing National Park** have been forced during the dry season 2021 to abandon their villages because they had no access to any nearby water. Our project that specifically encourages forest natural regeneration is strongly supported by the communities as they realise this is a concrete solution that may help the future prospects of their villages for generations to come.

The WCF vision to enhance the future of the critically endangered West African chimpanzee and its habitat throughout the countries from Guinea to Liberia and Côte d'Ivoire has been pursued and we have for the first time developed a fruitful collaboration with Sierra Leone, through a local Non-Governmental Organisation the Tacugama Chimpanzee Sanctuary and its authority the National Protected Area Authority.

In Guinea and Sierra Leone, we are now working with several partners to create a transboundary forest landscape including the **National Parks of Outamba and Kilimi** in the south, and the **forests of Sabouyah, Soyah and Pensilli** in the north. This biodiversity-rich landscape is inhabited not only by the critically endangered West African chimpanzees, but also by one of the largest West African populations of forest elephants, sadly also critically endangered.

In Guinea, where the largest population of West African chimpanzees is still found, WCF pursued our vision of a large forested corridor from the **Niokolo-Koba National Park in Senegal**, through the Foutah Djallon region with the newly created **Moyen-Bafing National Park** to the **Outamba National Park** in Sierra Leone. With the help of different collaborations, partnerships and generous funding agencies, we plan to expand in 2023 to new areas within this large corridor. The WCF signed an agreement with the Guinean government to help them to develop and manage 17 protected areas within the country. This is the bright side of our work!

At the same time, WCF is confronted with some of the important drivers of the biodiversity crisis worldwide, and we are learning new approaches to address those threats. One of them is the degradation and fragmentation of habitat through the development of mining projects. Guinea has invested a lot in developing its mineral resources and has become the first world producer of bauxite, the raw material for aluminium. They also have an extremely ambitious project to develop the largest global iron ore mine in the Simandou Mountains. Luckily, the government of Guinea wants the environmental factor to be well considered, and so we have been working with the “Ministère de l’Environnement et du Développement Durable” to ensure that a realistic and concrete mitigation plan will be implemented where development projects might have important negative impacts on biodiversity rich areas. However, such an approach means that unescapable negative impacts will be incurred on nature, and well-planned and financially-supported **offset projects** somewhere else in the country should compensate for those negative impacts. According to the World Bank, they should actually reach a net gain, by which more chimpanzees will be protected than those were negatively impacted. WCF is lobbying strongly with mining companies to reach such an outcome for its new landscape project.

In Liberia, after completing the creation of the **Grebo-Krahn National Park** in the east of the country at the border of Côte d’Ivoire, we are working with the local and national authorities to implement a new national park in the **Krahn-Bassa Proposed Protected Area**. With the strong support of the national authorities such as the Liberia Forestry Development Authority, there is a realisation that protecting the forest can, in the long run, profit the whole community for longer and in more diverse ways than the original prospect to sell the forest to logging companies that disappear once they have taken their share, leaving the communities with badly depleted resources.

In Côte d’Ivoire, the WCF has continued activities in **Tai National Park** and **Cavally Classified Forest** in collaboration with “Office Ivoirien des Parcs et Réserves” and “Société pour le Développement des Forêts” to ensure its sustainable management by fighting deforestation.

In 2022, WCF Liberia and Côte d’Ivoire started a large transboundary multi-year project with West Africa Biodiversity and Low Emissions Development (WABiLED) from USAID. The aim of the project is to reduce deforestation and biodiversity loss in the **Tai-Grebo-Krahn-Sapo forest landscape** through community ecoguards, community-based ecotourism, biomonitoring, and other targeted actions.

To achieve WCF’s goals in favour of biodiversity there is a dire need for **efficient and rapid tools to monitor wild animal populations**. To that end, we are not only implementing systematic biomonitoring in all the areas we help to manage, we are also at the forefront of improving automated methods to be able to rapidly analyse the many thousands of videos we collect in the areas. Our WCF biomonitoring team collaborates with different organisations worldwide to improve some open source tools to make the monitoring precise and efficient through the Zamba Cloud platform ([www.zambacloud.org](http://www.zambacloud.org)).

### The prospects for 2023

The biodiversity crisis will continue in 2023, and therefore WCF's efforts to create new protected areas are desperately needed. New sources of funding and new protected areas will help WCF to continue in 2023 to implement our successful conservation model. A broad collaboration has been established with Rainforest Trust and the USAID - WABiLED program that has granted WCF with two projects both in Guinea and in Liberia/Côte d'Ivoire to complement, among others the creation of the **Krahn-Bassa and Penselli-Soyah-Sabouyah National Parks**. Continued collaboration with the EU will possibly allow the WCF to implement more protected areas within the forested corridor through the Foutah Djallon in Guinea.

This will come with the need to increase our field staff in those countries and expand our areas of work. The work with the private sector, mainly mining companies, will remain strictly focused on enforcing the mitigation hierarchy, based on the four principles, avoidance, mitigation, restoration and compensation, so that in the end, the balance remains positive for nature. This requires some revolution in the way the private sector has been thinking and working, but luckily the worldwide move towards more care for the environment will enhance our aim to reach some positive results in the mid-term. The WCF is committed to achieve this goal.

To help us achieve this ambitious goal, WCF will adapt its collaboration with the chimpanzee offset project in the **Moyen-Bafing National Park** after more than 13 years. WCF will not apply to the Public Private Partnership process and we hope another qualified Non-Governmental Organisation will be found for managing the Moyen-Bafing National Park. WCF, in agreement with partners will continue, however, to perform the biomonitoring of the chimpanzees and the five indicator species in the Moyen-Bafing National Park. This will allow WCF to concentrate all its strength on the creation of new protected areas with partners, with the goal to help the "Ministère de l'Environnement et du Développement Durable" to establish a network of 17 protected areas in Guinea.

WCF will support **chimpanzee research projects**, urgently needed to ensure the conservation of the important chimpanzee populations in the Taï National Park, Côte d'Ivoire, in Loango National Park, Gabon, and in the Moyen-Bafing National Park, Guinea.

See below the detailed annual activity reports of **Côte d'Ivoire**, **Liberia** and **Guinea**.



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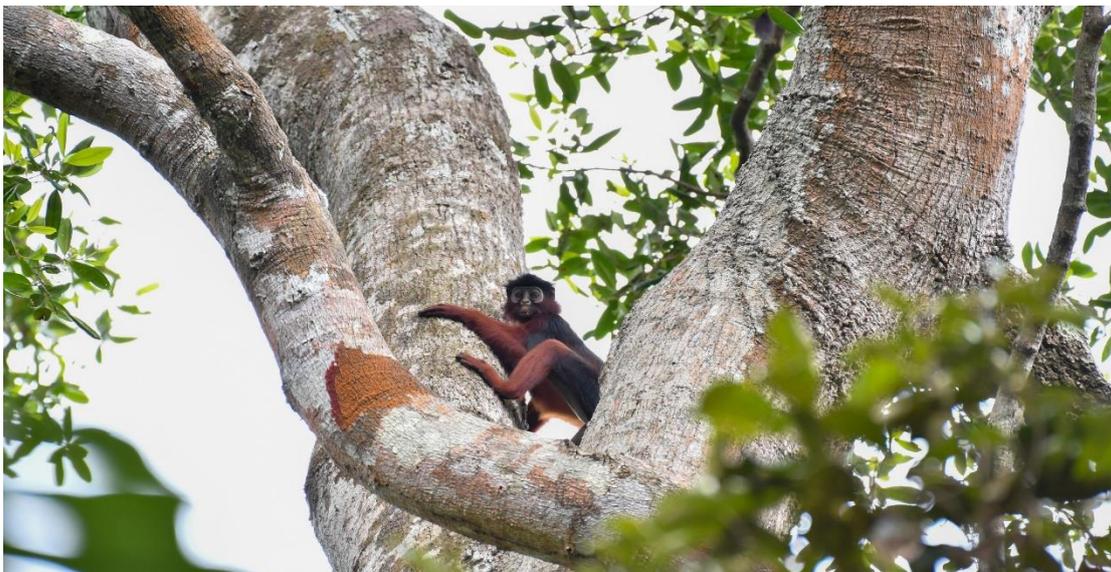
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## Annual Report 2022 – WCF Côte d'Ivoire



Abidjan, Côte d'Ivoire, December 2022

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**Acronyms**

CCF -	Cavally Classified Forest
GKNP:	Grebo-Krahn National Park
OIPR -	Office Ivoirien des Parcs et Réserves
NGO -	Non-Governmental Organisation
SODEFOR -	Société pour le Développement des Forêts
TNP -	Taï National Park
WCF -	Wild Chimpanzee Foundation

## Executive Summary

In Côte d'Ivoire, WCF has developed activities in the **Taï National Park** (TNP) to ensure its conservation and in **Cavally Classified Forest** (CCF) by fighting against deforestation. Activities in 2022 included biomonitoring, ecoguard program, awareness raising, and ecotourism with new projects being developed towards the end of the year.

In August 2022, a team of **six video analysts** was recruited and trained, as part of the **biomonitoring activities**. The process of identifying species from the videos began in September, with the videos from the 2021-2022 data collected in Taï National Park. The camera traps provided **82,202 video clips, of which 70.32% were analyzed** in 2022. The analyses of the videos for Grebo-Krahn National Park (GKNP) in Liberia, continued in parallel with precise analyses of the distances from the animal to the camera for seven species.

This year, the WCF biomonitoring team was able to **publish one scientific paper**; “*Animal reactivity to camera traps and its effects on abundance estimates using distance sampling in the Taï National Park, Côte d'Ivoire*” in the International Journal JPeer (*Houa et al. 2022*), and we are finishing and submitting a second publication in 2023 with the title: “*Accurately counting animals with camera trap distance sampling*”.

The **antipoaching and biomonitoring teams covered 996 km of missions** in the ecotourism and research area of Taï National Park. Eight diurnal monkey species and other key species, including critically endangered West African chimpanzee and African forest elephant were observed. Illegal activities in 2022 were lower than the previous year with an encounter rate of 0.34 ind/km, however, the number of gunshots heard at night has increased. In the second half of the year, a team of 10 ecoguards, including three women, was recruited and trained to patrol in Cavally Classified Forest. While awaiting authorization to commence patrols in the CCF, the team patrolled for 10 days in November 2022 in the Taï National Park to support the search for chimpanzees, and the first mission in the Cavally Classified Forest was organised in December 2022.

During **awareness raising sessions** around Taï National Park and Cavally Classified Forest several topics were discussed this year, such as the WCF's projects carried out in the region and zoonoses. The campaign on zoonoses was conducted, with a focus on **prevention of COVID-19**. Another awareness raising campaign focused on disease transmissions was carried out for women restaurant owners (who potentially cook bushmeat). In 2022, **1539 people participated in the awareness raising sessions** including 573 women.

The ecotourism program saw an increase in visits in 2022, despite the closure of the site during the entire month of January. **178 tourists were welcomed at Taï Ecotourism** for a total of 367 bed-nights. These tourist visits have generated more than 29 million FCFA (more than €4,000) which, after deducting community benefits and taxes paid to the municipality of Taï and fees paid to “Office Ivoirien des Parcs et Réserves” (OIPR), represents 33% of the annual operational costs of the project, a promising step towards self-financing.

## 1. Biomonitoring

### 1.1. Training in biomonitoring data analysis

Estimating species density and abundance requires complex analyses that are facilitated by the use of Distance software. The new version 7.4 assists in the analysis of video data from camera traps, and can detect the presence or absence of animals in the footage.

In May and June 2022, the WCF Côte d'Ivoire office hosted an initial training session of two weeks for the biomonitoring supervisors from all three countries where WCF operates to improve their skills in using the software. The first week of training provided a general review of distance sampling methods, particularly those involving camera traps, and addressed the creation of sampling designs using the Distance 7.4 software. During the second week, the biomonitoring team reviewed and practiced using the software, and discussed statistical analyses.

A second training session on biomonitoring data analysis took place in Abidjan from 14 to 29 December to train students analysing Taï National Park video data, to select an Ivorian PhD student to support biomonitoring in Guinea, and to support capacity of the Guinean team on biomonitoring. Five people were trained in basic analyses, with subjects covered including; database management, mapping, survey design, and density and abundance estimation from camera trap data.

### 1.2. Recruitment and training of a video analyst team

To set up a video analysis team for biomonitoring data based on camera traps, the recruitment and training of six video analysts was organised in August and September 2022. The training itself was organised over four days, from 13 to 16 September. Ten pre-selected candidates were trained to recognise and identify animal species, and to estimate the distance of the animals from the camera. Six candidates were selected to join the team.

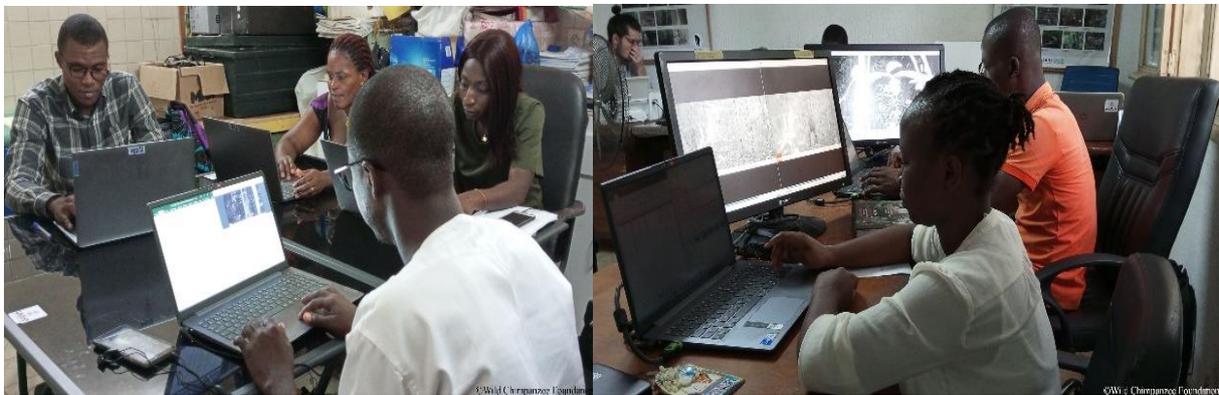


*The participating candidates for the video analysis training and team selection in Abidjan*

### 1.3. Camera trap data analysis

The six video analysts began with the identification of species from the videos collected by “Office Ivoirien des Parcs et Réserves” (OIPR) in Taï National Park for the 2021-2022 survey period. In total, the installed cameras provided 82,202 videos. An average of 3,752 videos were analysed per week. Over the year, 57,801 videos were analysed or 70.32%. The identification database included 149 videos of chimpanzees, and 196 videos of African forest elephants, 72 clips with leopards, and 115 had pygmy hippopotamus. Of 82,202 videos, only 42,003 (51%) contain at least one animal species, the rest are empty videos or manipulation/measurement videos.

To finalise the biomonitoring report for the Grebo-Krahn National Park in Liberia, density and abundance estimates for additional species were required. Thus, since 17 November 2022, two video analysts have been estimating the distances of the animal relative to the camera. To date, the database for the distances of seven species are available: pangolins, bongo, Jentink's duiker, zebra duiker, bay duiker, yellow-backed duiker, and Liberian mongoose.



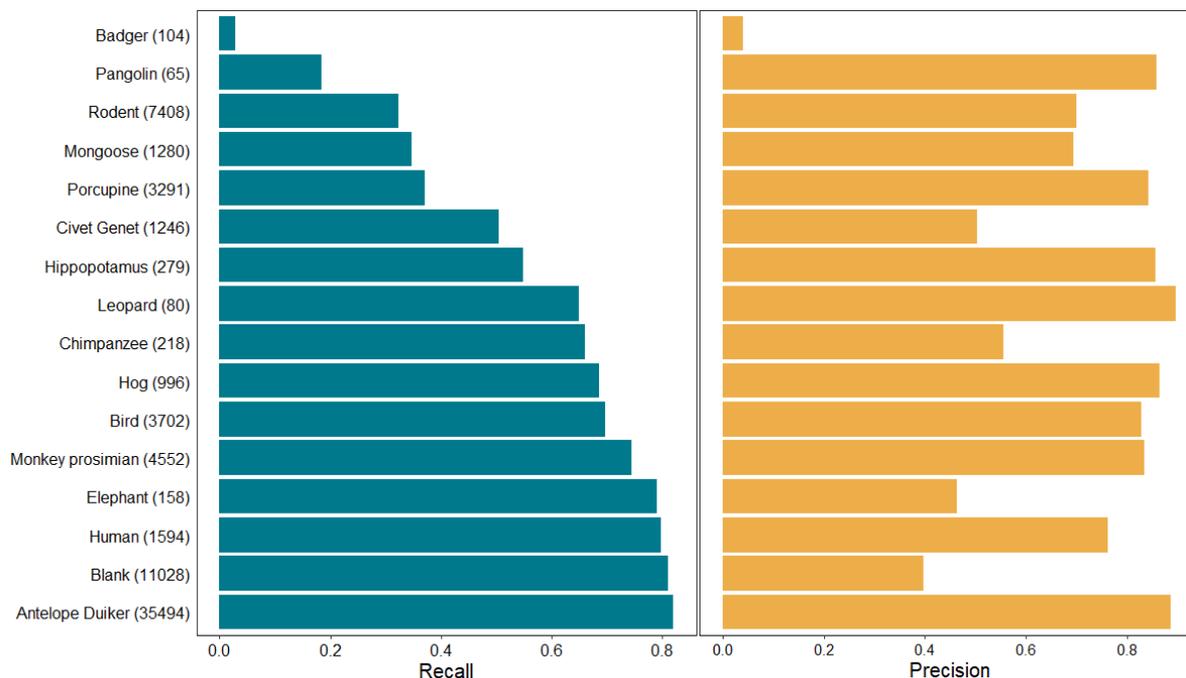
***Video analysis: The analysis team working on species recognition and distance determination at two second intervals***

Currently, with the realisation of the large variation in the coefficient of variation obtained for different species in the forest, we analysed the main factors explaining this and how it could be best controlled for. The coefficient of variation varies between 10% and 60%. The provisional title of the publication is “*Accurately counting animals with camera trap distance sampling*”, to be submitted for publication in a scientific journal in 2023.

### 1.4. Detection and classification of animals from camera traps using Zamba

Zamba ([www.zambacloud.org](http://www.zambacloud.org)) is a machine learning tool that the WCF is developing with Driven Data Inc. to automatically detect and classify animals from camera trap videos. The basic model can recognise empty videos with accuracy close to 90% and 32 species categories (e.g. duikers, leopards, elephants, chimpanzees/bonobos...etc.). The WCF team worldwide is developing its ability to detect West African animal species of special interest to our work. The team in Abidjan, with supervision from headquarters in Leipzig is helping Zamba to estimate automatically the distance of an animal from the camera, which is a requirement for estimating the species abundance and density using the remote sampling method. This however, still done by hand with our team in Abidjan and Labé, Guinea. Once Zamba will be able to achieve this, the analysis of data from camera traps will be greatly accelerated.

We tested the Zamba efficiency, in terms of precision and accuracy (recall), on the Tai National Park phase 1 camera trap data before starting the training and compared it with the manual identifications:

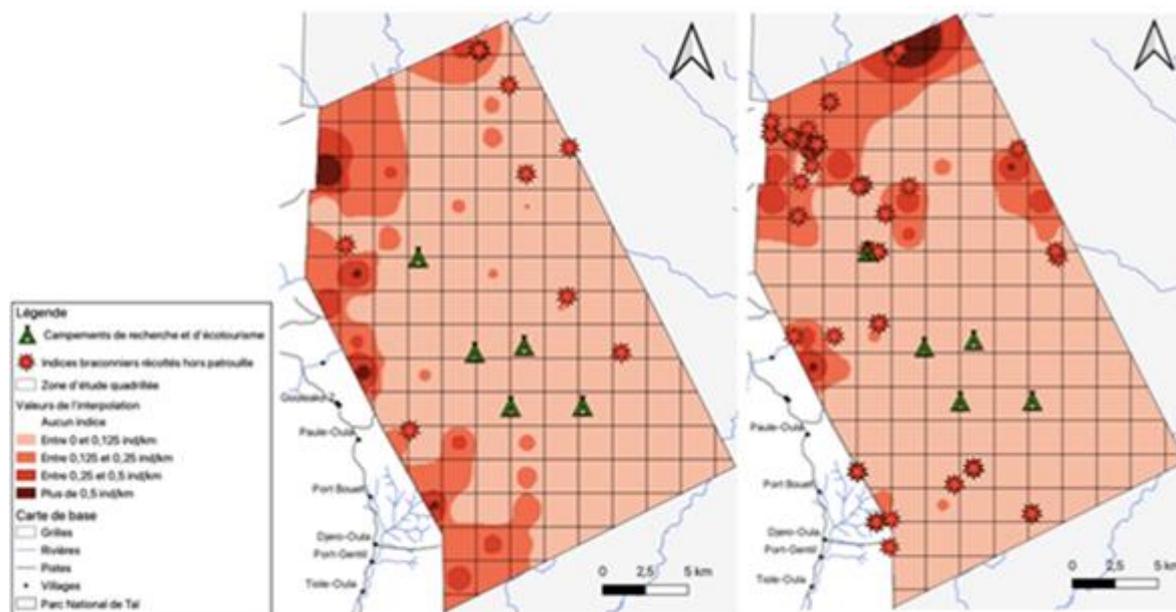


**Figure 1: Results of the Tai National Park 2019-2020 data through Zamba to determine recall and precision on various species** (Recall is the proportion of correctly detected animals among all detectable animals. For example, if Zamba detected only 80 chimpanzee videos out of 100 available, the recall would be 0.80. Precision is the proportion of correctly detected animals among all detected animals. For example, if there were 100 videos of chimpanzees and Zamba detected 120, the precision would be 0.83)

Zamba is used at present by the WCF biomonitoring team to select empty videos, and the rest of the analysis is still done by our video analysts.

### 1.5. Biomonitoring and antipoaching in Tai National Park

Two community ecoguard teams patrolled the research and ecotourism area of the Tai National Park to collect data on wildlife and illegal human activities: the anti-poaching team, employed by the Tai Chimpanzee Project, and the biomonitoring team, employed by WCF on behalf of the ecotourism project. The two teams of community ecoguards enter the forest simultaneously to cover greater distances and a larger area of the park. The ecoguards covered a total of 996 km in 2022, 680 km of which were covered during reconnaissance walks. Among the most common species, western red colobus (*Piliocolobus badius*) and Diana monkey (*Cercopithecus diana*) were widely observed, both directly and indirectly, with encounter rates of 0.45 and 0.5 signs (observations) per kilometre travelled, respectively. The observed encounter rate of African forest elephants (*Loxodonta cyclotis*) was 0.25 signs/km, and 0.16 signs/km for the pygmy hippopotamus (*Choeropsis liberiensis*).



**Figure 1 : Spatial distribution of illegal activity signs identified on patrol during 2021 (left) and 2022 (right) as well as the illegal activity signs identified off patrol mostly at night (red stars)**

In 2022, the rate of illegal human activity calculated from patrol data (0.34 signs/km) is lower than that calculated in 2021 (0.45 signs/km), especially for the periphery of the park. However, illegal activity rates are higher in the north of the study area for both 2021 and 2022 (Figure 2). A higher number of illegal activities off patrols (mostly at night) were recorded on the northern and southern peripheries of the park, which was not the case in 2021.

### 1.6. Monitoring in Cavally Classified Forest

In Cavally Classified Forest, WCF works in close collaboration with the “Société pour le Développement des Forêts” (SODEFOR) to carry out activities to combat poaching and deforestation. One of the activities is a monitoring program through which community ecoguards make patrols and record wildlife presence, signs of illegal human activities, and monitor forest status.

Despite the decrease in funding for the area this year, the community ecoguards were able to support SODEFOR on three patrols corresponding to 35 days of effective presence in the forest, including two patrols between January and April, and a third patrol in December 2022. During the second half of this year, the program was re-launched and a team of 10 ecoguards was re-formed, consisting of old and new recruits. Training sessions were organised in September in two stages. The first, from 8 to 10 September for those who had previously worked in the monitoring program as ecoguards, and the second session from 20 to 24 September was dedicated to the new recruits who had no basic knowledge of data collection in the forest and had never used a GPS device and compass.

In total, 19 persons, including five women were trained by the WCF on data collection methodology, identification of animals in the forest, technical equipment use (GPS, compass, smartphone), appropriate behaviours concerning human rights and the environment. At the end of the training, an evaluation resulted in the retraining of 10 trainees as community ecoguards, including three women. In order to practice in an ecologically healthy field setting, and to

support the ecotourism project in the search for chimpanzees, a first mission was organised in Taï National Park from 14 to 23 November 2022.

To optimise the effectiveness of the patrolling and anti-poaching activities, the ecoguards will work exclusively in the southern conservation zone of Cavally Classified Forest where a 134-cell grid of 1 km<sup>2</sup> has been established. The monitoring missions effectively commenced in the south of Cavally Classified Forest with a 10-day patrol from 5 to 14 December by the ten community ecoguards and four SODEFOR rangers, who walked 225 km inside Cavally forest.

During this patrol mission, 15 snare traps were dismantled, as well as fishing nets that had been installed along the river. The ecoguards collected information on illegal activities and signs of threatened species such as pygmy hippopotamus. In the patrolled area, it was estimated that more than 80% of the forest was intact.



*Project presentation meeting in Zagné with representatives from SODEFOR, the logging company (left) and a project presentation meeting at the SODEFOR office in Man (right)*

## 2. Awareness raising

Awareness raising was carried out in villages and camps around Taï National Park and at the ecomuseum and schools in Taï. Several themes were addressed this year: zoonoses (how they emerge, the different known zoonoses, methods to avoid the emergence of new diseases), deforestation (the causes and consequences for local communities) and anti-poaching measures. The outreach sessions totalled 1,133 participants, including 964 men, 155 women, and 14 children in 47 localities, villages, and camps (from Zagné to Djouroutou).

The Taï ecomuseum, the tourist and environmental education site, welcomed 1,022 visitors in 2022; including 392 females and 630 males, who were mostly students. Regional school students benefitted from an education program that allowed them to discover the alphabet (for the youngest), the animals of the park through various documentaries and board games.

In April and May 2022, 84 students discovered the wildlife that is present in TNP. Additionally, environmental education classes were given to more than 170 students at “Les Boyas” middle school, from February to April. A total of 20 hours of classes were held on the following themes: composition of water, air, and soil, and pollution; the concept of habitat/ecosystem, and the distribution of tropical forests in the world; the role of trees in the environment, structure and function of a tree; diversity and classification of species and threatened species: the case of elephants and chimpanzees.



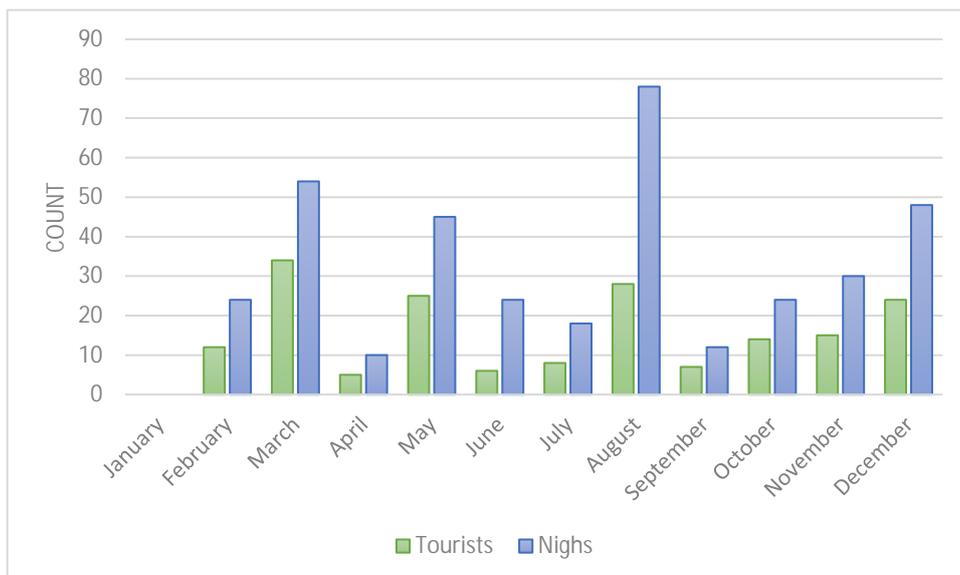
*Awareness raising at Gbegbekro in July 2022 (left) and a school class visiting the Tai ecomuseum in December 2022 (right)*

The campaign on zoonoses was conducted, with a focus on **prevention of COVID-19**. Another awareness raising campaign focused on disease transmissions was carried out for women restaurant owners (who potentially cook bushmeat). In 2022, **1539 people participated in the awareness raising sessions** including 573 women.

### 3. Alternative livelihoods

#### 3.1. Tai Ecotourism

In January 2022, the site was closed to tourists following an outbreak of COVID-19. Guides were systematically tested throughout the year to reduce the risk of spreading the virus to both humans and animals in the forest. The site has been continuously open since February, and tourists are tested before entering the forest. Online communications of the site were increased by intensifying social network posts, leading to 178 tourists being welcomed in 2022, with a total of 367 bed-nights spent at the camp (Figure 3). Four periods of elevated bookings were observed in March, May, August and December, where the project received 24 or more visitors in each of these months.



**Figure 3: Monthly information on the number of tourists and overnight stays at the Tai Ecotourism site in 2022.**

More than half of the tourists (52.7%) chose the visit option that includes two nights in the forest, and several groups requested to spend even more time in the forest (9.6%).

The tourist entry fees totalled 29,020,000 FCFA (~€44,254) for the year. The profit for Taï Ecotourism was 22,181,500 FCFA (~€33,825), which constitutes a third of the break-even amount of 66,252,912 FCFA (~€101,000). The amounts and taxes were transferred in accordance with the agreement between the Taï Mayor's Office, OIPR and WCF, and the profits from community projects were received by the groups concerned.

**Table 1: Breakdown of the turnover according to project partners in FCFA**

2022	Income Ecotourism Taï - Forest component	Income Ecotourism Taï - Cultural component in Daobly village	Park entrance fee (OIPR)	Taxes paid to the Taï Mayor's Office	Total Income Ecotourism Taï
<b>Total (FCFA)</b>	22 181 500	1 024 000	4 924 500	890 000	29 020 000

In order to evaluate the ecotourism project, a satisfaction questionnaire is presented to visitors to complete; 78% of the tourists completed the questionnaire, and the ecotourism project received an 88% overall satisfaction rate. Concerning the categories related to the forest experience component, which is led by WCF (accommodation, catering, and activities in the forest, and the staff), the satisfaction rates exceeded 92%.

This year, the option of a one-day circuit tour was added to the list of experiences at Taï Ecotourism. This circuit, inaugurated on 29 January in the presence of OIPR agents and staff of the Taï Town Hall, received 22 tourists. Among the visitors, eight teachers from Taï were able to visit the Taï National Park and enjoy a picnic on the banks of N'Zé river.

### 3.2. Primate habituation for ecotourism

The primary objective of the ecotourism project is to strengthen the protection of wildlife in the Taï National Park. The constant presence of the tourist guides who ensure constant follows of the primate groups that are habituated, or in the process of habituation to human presence, ensures that individuals in these groups will not be hunted by poachers. Thus, the development of these tourist activities has a direct positive impact on these primate groups.

The mangabeys are followed the full day from the time they awake until they sleep. On average, the group is successfully followed for more than 29 days/month. The group is composed of more than 60 individuals, including 15 adult females, and there were six births in the group this year. A western red colobus group is monitored less frequently, on average one day per week, as they are easy to find close to the camp and they maintain a territory of about one km<sup>2</sup>. The group consists of around 40 individuals.

Effort was made this year to increase the number of days spent searching for chimpanzees, which now averages 25 days/month. Chimpanzee habituation is a slow process, and it is still very difficult to observe them. However, 11 and 10 chimpanzees were observed respectively in March and July. The ecoguard mission to the west of the camp revealed greater insight into the group's home range, and it is now known that the chimpanzees' territory extends largely westward towards the N'Zé River.

### 3.3. Community-based ecotourism initiatives

One of the objectives of the Taï Ecotourism project is to create green jobs related to ecotourism activities. Some are direct jobs, as it is the case with the 26 community ecoguides and assistants and others receive support for the development of ecotourism initiatives, including the cultural component of the project, this year carried out by the village of Daobly, which received a benefit of 1,024,000 FCFA (~€1,562).

Four other initiatives are under development:

- Permaculture; vegetables harvested from a community garden are used for the preparation of tourist meals at the ecotourism camp. Only one of the five groups trained in 2020 is still in existence and continues to provide the project with vegetables. However, to produce year-round, they need further support to acquire the necessary equipment to facilitate watering of the crops.
- Rachelle Guehi, a local baker who usually sells cakes at the markets, has also started to sell her products at the ecomuseum, where she received a profit of 50,000 FCFA (~€76) in 2022.
- A beekeeping project in which two villages are active: Keibly and Paule-Oula, each of which had a honey harvest this year. They need to expand to be able to increase their outputs and consequential profits, and a project is in preparation to support them.
- A makoré butter processing group was able to sell 27kg of butter in February 2022 via a buyer in Abidjan who is also interested in other types of forest seed oils. Some of the butter was packaged to be sold at the ecomuseum.

Approximately, 18 persons benefitted from these community-based initiatives. Hence, along with the 26 community ecoguides and assistants, 44 incomes are supported by the ecotourism project which could ensure self-sustaining green jobs upon the project reaching self-financing.



*Community ecoguides employed by the WCF / Taï Ecotourism project*

#### **4. Acknowledgements**

WCF-Côte d'Ivoire would like to thank its financial and technical partners as well as the administrative and political authorities of Côte d'Ivoire. The WCF especially thanks the “Office des Parcs et Réserves de Côte d'Ivoire” and “Société de Développement des Forêts” for their collaboration in the execution of all projects around and in the Taï National Park and the Cavally Classified Forest. We thank the Ministry of Foreign Affairs for facilitating the WCF missions in Côte d'Ivoire and are grateful to the other partners in Côte d'Ivoire whom we wish to thank for their collaboration and support: the Ministry of Water and Forests, the Ministry of Justice and Human Rights in particular the High Authority for Good Governance, the Ministry of Security and Civil Protection, in particular the National Police and Gendarmerie, the Mairie de Taï, the NGO NOFNA and Alma Production.

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#### **5. References**

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# WILD CHIMPANZEE FOUNDATION

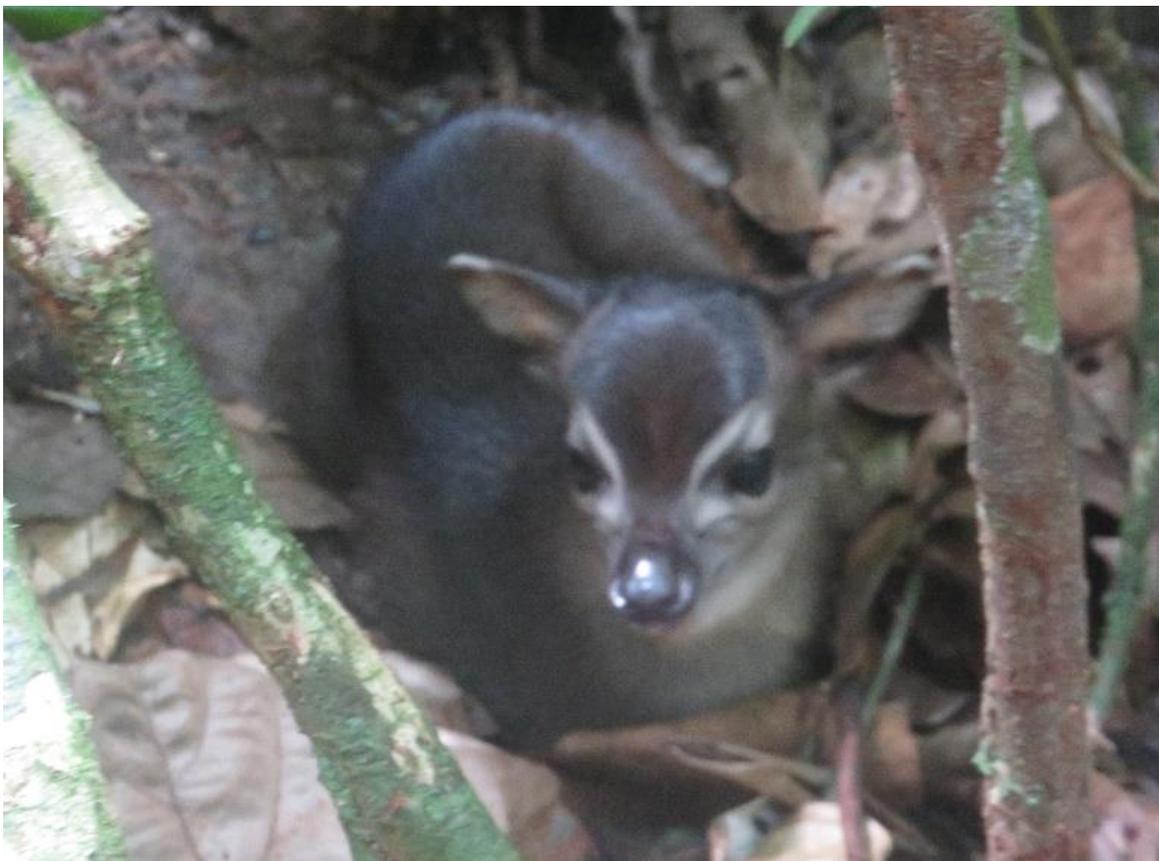


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## ACTIVITY REPORT 2022 – WCF LIBERIA

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*A MAXWELL'S DUIKER IN GREBO-KRAHN NATIONAL PARK*

**JANUARY - DECEMBER 2022**

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**Acronyms**

CSPPA -	Cestos-Senkwehn Proposed Protected Area
EPA -	Environmental Protection Agency (Liberia)
EU -	European Union
FDA -	Forestry Development Authority (Liberia)
FFI -	Fauna and Flora International
FTI -	Forestry Training Institute
GFNP	Gola Forest National Park
GKNP-	Grebo-Krahn National Park
KBPPA -	Krahn-Bassa Proposed Protected Area
LCRP -	Liberia Chimpanzee Rescue and Protection
LESC -	Law Enforcement Sub-Committee
LINTA -	Liberia National Tourism Association
LiWiSa -	Libassa Wildlife Sanctuary
LLA -	Liberia Land Authority
LNP -	Liberia National Police
MIA -	Ministry of Internal Affairs
MICAT -	Ministry of Information, Cultural Affairs and Tourism
MoJ -	Ministry of Justice
MoU -	Memorandum of Understanding
NGO -	Non-Governmental Organization
RIDA -	Rural Integrated Development Agency
RSPB -	Royal Society for the Protection of Birds
SCNL -	Society for the Conservation of Nature of Liberia
SHIFSD	Self-Help Initiative for Sustainable Development
SMART -	Spatial Monitoring and Reporting Tool
SNP -	Sapo National Park
UNDP -	United Nations Development Program
UOF -	Universal Outreach Foundation
WABiLED -	West Africa Biodiversity and Low Emissions Development
WCF -	Wild Chimpanzee Foundation
WCTF -	Wildlife Crime Task Force
ZSL -	Zoological Society of London

## 1. Executive Summary

In Liberia, the Wild Chimpanzee Foundation (WCF) continues to be active through regional and national initiatives and with a direct presence in the southeast of the country: In and around **Grebo-Krahn National Park (GKNP)** and **Sapo National Park (SNP)**, as well as **Krahn-Bassa Proposed Protected Area (KBPPA)** and **Cestos-Senkwehn Proposed Protected Area (CSPPA)**.

In 2022, the WCF activities in Liberia, all implemented in close collaboration with the Liberian Forestry Development Authority (FDA) and other government institutions and partners, focused on the **community ecoguard program, capacity building, livelihood support, awareness, programs to reduce illegal wildlife and bushmeat trade, ecotourism, infrastructure development** and other **pre-gazettement activities for Krahn-Bassa Proposed Protected Area**, such as **participatory land use mapping** and engagement with lawmakers, Civil Society Organizations and government stakeholders involved in the gazettement of KBPPA.

On a national level, WCF has been working in close collaboration with FDA, the Society for the Conservation of Nature of Liberia (SCNL) and the Royal Society for the Protection of Birds (RSPB) to support **community ecoguard programs** at Lake Piso Sustainable Multiple Use Reserve, Gola Forest National Park, and Foya Proposed Protected Area, specifically to increase the number of female community ecoguards in those areas.

WCF also extended the collaboration with the Liberia Marketing Association to a national level, to conduct **bushmeat market surveys** and extend the **community volunteer program with female bushmeat sellers** across Liberia. Another major national activity in 2022 was **training for all Liberia protected area staff** to ensure improved management of all (proposed) protected areas in Liberia.

By mid-2022, WCF Liberia started the implementation of several larger multi-year projects, the Great Ape Conservation Fund from U.S. Fish and Wildlife Service, Liberia Forest Sector Project, Illegal Wildlife Trade Challenge Fund, Rainforest Trust, Rainforest Rescue, and West Africa Biodiversity and Low Emissions Development (WABiLED) from USAID, which led to a significant expansion of the team and allowed for the purchase of new equipment, such as vehicles, motorbikes, and laptops, which were urgently needed.

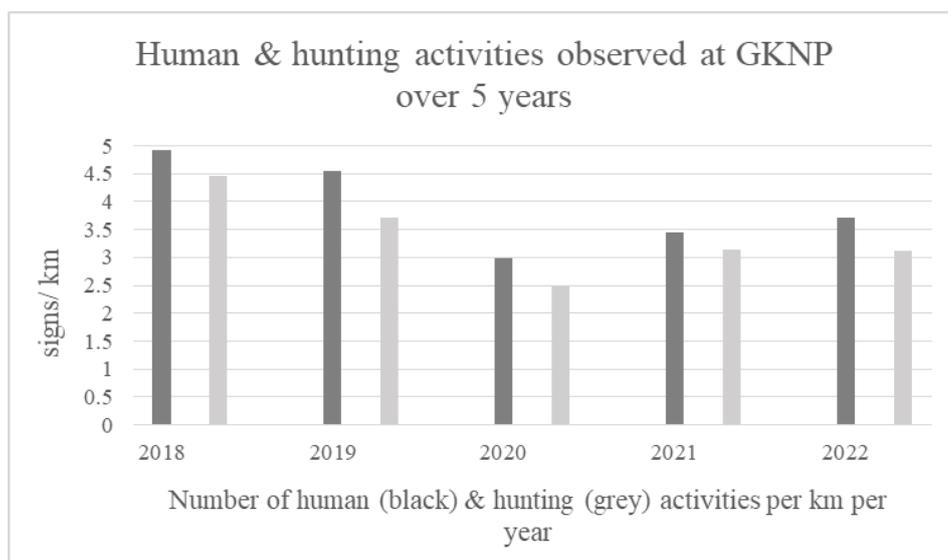
WCF's major activities in Liberia from January to December 2022 are outlined below:

## 2. Community Ecoguard Program at Grebo-Krahn National Park, Krahn-Bassa Proposed Protected Area, Cestos-Senkwehn Proposed Protected Area, and nationally

### • *Grebo-Krahn National Park*

From January to December 2022, the seven community ecoguard teams at **Grebo-Krahn National Park (GKNP)** conducted **42 forest patrols**, covering a total number of 245 grid cells (each grid cell being 4x4km) with repeated visits to most grid cells and a total distance covered of 1,211.6 km. The number of days spent on forest patrol was 298, with a total of 1,486 person days. The teams made 1,075 wildlife observations, including observations of all key species, such as western chimpanzee, forest elephant, pygmy hippopotamus and leopard. The seven community ecoguard teams at GKNP are comprised of 28 community members, 11 of whom are women.

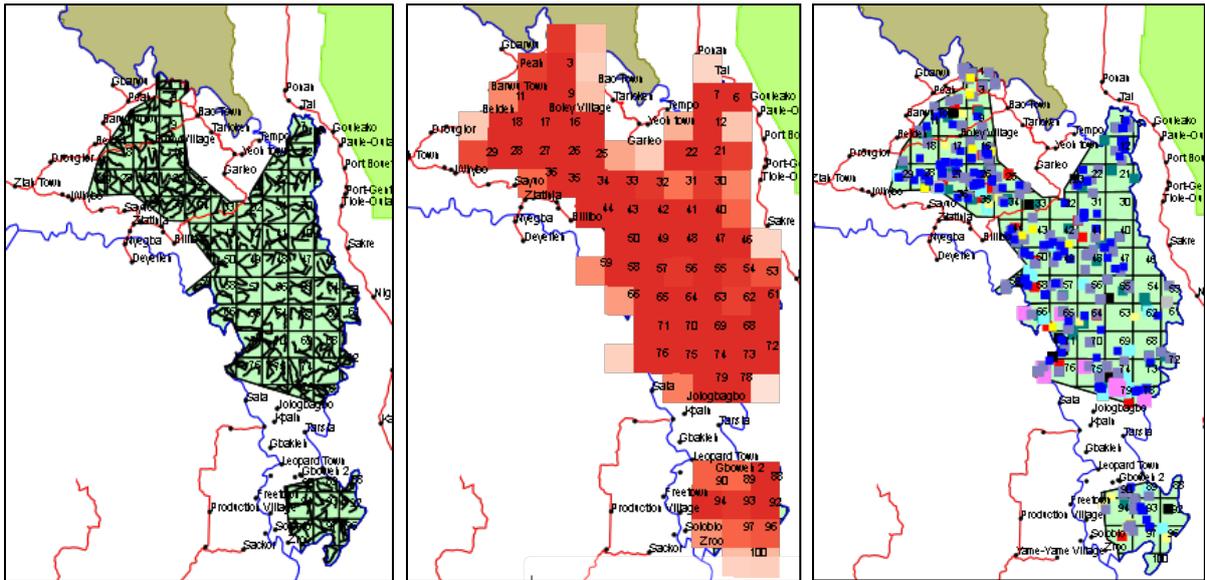
The teams observed **4,507 signs of illegal human activities**, including 3,781 signs of hunting. With an encounter rate of **3.72 signs of human activities per kilometer**, and 3.12 signs of hunting per kilometer. Compared to 2021, the rate for human activities has alarmingly increased (by 7%) when the human activity encounter rate was 3.45 signs per kilometer. However, compared to 2018, when encounter rates were 4.92 signs/km for human activities and 4.47 signs/km for hunting activities, the number of human activities shows a decrease of 24.4% and 30.2%, respectively. Major threats observed by the teams were poaching, mining, tree felling, and chewing stick extraction. Spatial Monitoring and Reporting Tool (SMART) reports have been regularly produced and the information has been shared with FDA, in order to allow for the planning of law enforcement missions with the joint security. However, due to the lack of funding and of law enforcement personnel, not a single law enforcement mission was conducted in 2022, neither by FDA, nor by the joint security.



*Encounter rates (signs/km) of human and hunting activities observed in Grebo-Krahn National Park from 2018 to 2022.*



*A chimpanzee nest spotted on patrol (left), and an artisanal gold mining site seen near Grebo-Krahn National Park (right) observed by the community ecoguard teams.*



*Map of community ecoguard patrol coverage in GKNP throughout 2022*

*Map of encounter rates of human activities from patrols conducted in GKNP in 2022. The darker the red, the higher the encounter rate of human activities.*

*Map showing the distribution of wildlife (direct and indirect) observations of large mammals made during patrols in 2022.*



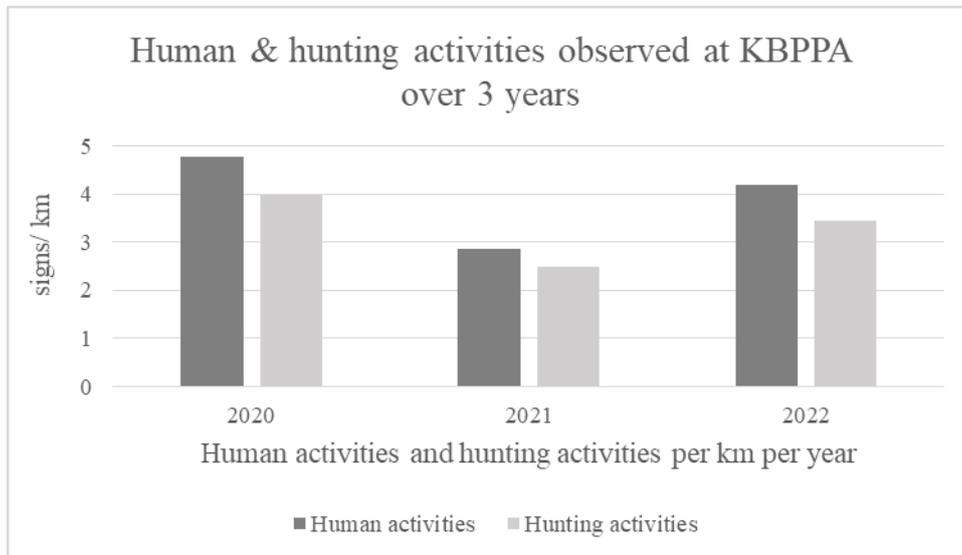
*Community ecoguards raising awareness around Grebo-Krahn National Park.*

After the forest patrols, the community ecoguard teams held **82 awareness meetings** in the communities adjacent to Grebo-Krahn National Park. During the meetings, a total of **1,131 community members** were sensitized, including 483 women and 648 men. These awareness meetings allow for a dialogue between community ecoguards and local community members to discuss illegal encroachment within the park and strategize approaches to discourage future illegal activities.

• ***Krahn-Bassa Proposed Protected Area***

Following two additional training sessions, four additional community ecoguard teams were created and added to the **Krahn-Bassa Proposed Protected Area (KBPPA)** Community Ecoguard Program in 2022. The new teams are comprised of 16 community members (six of whom are women). In total, KBPPA now has eight ecoguard teams with 32 community members (eleven of whom are women). From January to December 2022, the ecoguard teams in KBPPA carried out **15 forest patrols**. The number of patrols remain at a lower level, linked to the ongoing pre-gazettement activities at KBPPA in which the ecoguards or their FDA team leaders have been deeply involved, thus not allowing them to conduct their regular patrols.

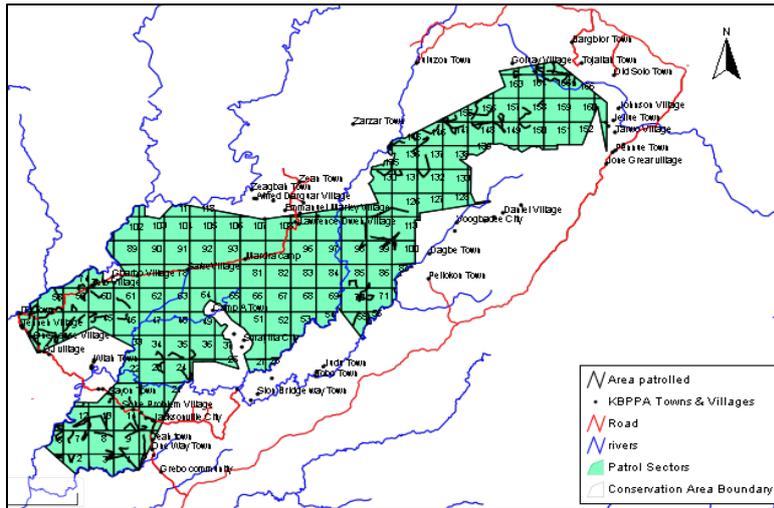
During the community ecoguard patrols, the teams covered a total distance of **442.3 km**, over 109 patrol days or 543 person days. During the patrols, the teams observed **1,856 signs of human activities** (of which 82% or 1,522 were hunting related, incl. trails) resulting in an encounter rate of **4.2 signs/km**. This is a 31.9% increase from 2021, when an encounter rate of 2.86 signs/km was recorded. However, these rates are 12.3% lower than those observed in 2020, where the human activity encounter rate was 4.79 signs/km. In 2022, the ecoguard teams made **391 wildlife observations**, including observations of all key species, such as western chimpanzee, forest elephant, pygmy hippopotamus, Jentink’s duiker, and western red colobus.



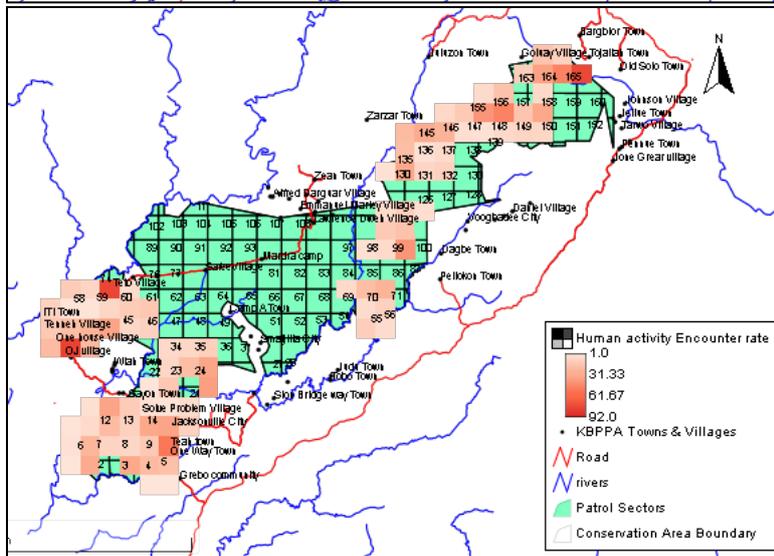
***Encounter rates (signs/km) of human and hunting activities observed in Krahn-Bassa Proposed Protected Area from 2020 to 2022.***



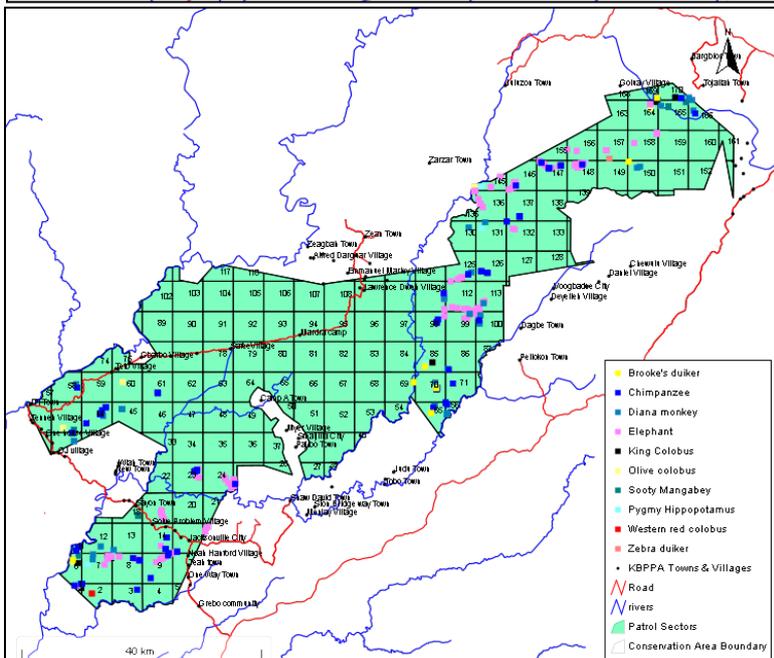
***Carcasses, including an endangered pangolin, killed by poachers in the Krahn-Bassa Proposed Protected Area.***



*Map of community ecoguard patrol coverage in Krahn-Bassa Proposed Protected Area throughout 2022.*



*Map showing the encounter rates of human activity within the patrolled area of Krahn-Bassa Proposed Protected Area in 2022. The darker the red, the higher the encounter rate of human activities.*



*Map of Krahn-Bassa Proposed Protected Area, showing locations of observations of selected threatened mammal species for 2022.*

After the forest patrols, the teams held **awareness meetings in 31** surrounding communities, where **585 people** were sensitized (152 women, 433 men).

- ***Cestos-Senkwehn Proposed Protected Area***

In 2022, two community ecoguard teams were added to the existing three teams at **Cestos-Senkwehn Proposed Protected Area (CSPPA)**. The five teams are comprised of 20 community members (including six women). As WCF is not the lead partner for the gazettement activities at CSPPA, and as meetings about the continuation of the community ecoguard program with FDA and their lead partner are still pending, the number of community ecoguard patrols in 2022 has remained limited, until better coordination in the landscape will be put into place by FDA. Some communities in the area are still reluctant with regard to the planned creation of the future protected area. However, not being the CSPPA lead partner, WCF cannot engage in further awareness with local communities, without any specific mandate given by FDA.

From January to December 2022, the five community ecoguard teams at CSPPA conducted **11 forest patrols**, covering a total number of 83 grid cells (each grid cell being 4x4km) and a total distance covered of **336.6 km**. The number of days spent on forest patrol was 82, with a total of 495 person days. The teams made **262 wildlife observations**, including observations of key species, such as western chimpanzee, forest elephant, pygmy hippopotamus and various threatened monkey species.

The teams observed **1,501 signs of illegal human activities**, including 1,236 signs of hunting. With an encounter rate of **4.46 signs of human activities per kilometer**, and 3.67 signs of hunting per kilometer. This now serves as the baseline for future evaluation of changes in activities over time. Major threats observed by the teams were hunting, human settlements, farming and mining activities.

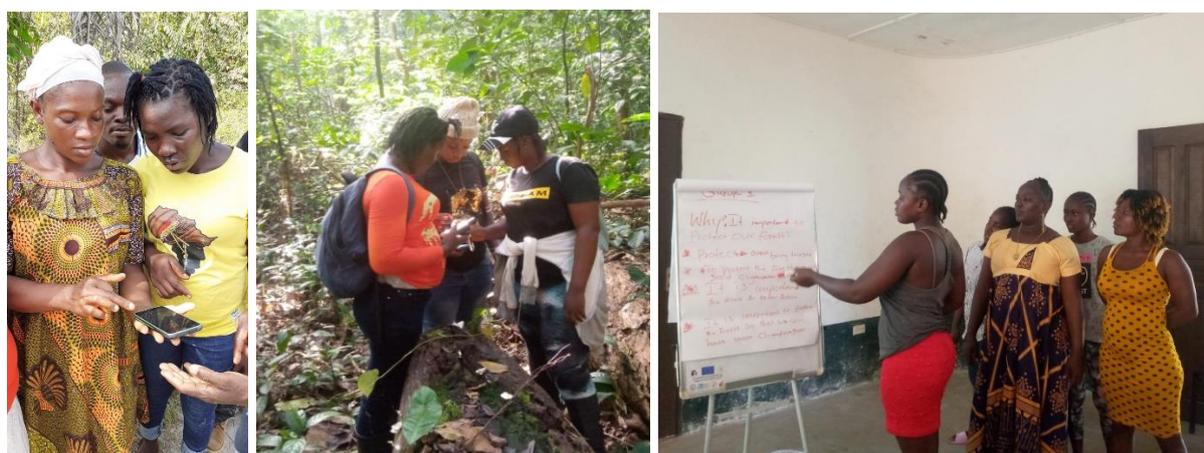


*An awareness raising meeting following a patrol in a community adjacent to Cestos-Senkwehn Proposed Protected Area (left). Community ecoguard Team Leader, Janet Nyanway on patrol in the forest in CSPPA (right).*

- ***Community ecoguard program in northwestern Liberia***

On the **national level**, WCF, in close collaboration with the Royal Society for the Protection of Birds (RSPB) and the Society for the Conservation of Nature of Liberia (SCNL) continued to support **community ecoguard programs** at Lake Piso Sustainable Multiple Use Reserve, Gola Forest National Park, and Foya Proposed Protected Area. The community ecoguard teams at Lake Piso Multiple Sustainable Use Reserve conducted ten patrols in 2022. Awareness raising activities in communities and local schools reached 535 people (272 women, 233 men, and 30 children). Due to a lack of funding for food supplies, no patrols were conducted in the second half of 2022.

Regular community ecoguard patrols are being carried out in Gola Forest National Park. The teams have observed all key species, such as western chimpanzee, forest elephant, pygmy hippopotamus and leopard. During the second half of 2022, a special focus was on the recruitment of additional female community ecoguards, to ensure that at least ten women are part of the teams in each of the three areas in northwestern Liberia. In collaboration with FDA, SCNL, and RSPB, the women received training in the community ecoguard patrol methodology, use of equipment, species identification, etc. They started to conduct their first patrols and to receive further training on the digital data collection with SMART mobile.



*Training for new female community ecoguards at Lake Piso Sustainable Multiple Use Reserve.*

### 3. Support for local communities

The support for community members around Grebo-Krahn National Park (GKNP), Sapo National Park (SNP), Krahn-Bassa Proposed Protected Area (KBPPA) and Cestos-Senkwehn Proposed Protected Area (CSPPA) comprises various activities, from direct support through the payment of monthly stipends to **beekeeping, skill-based training, infrastructure support and community-based ecotourism.**

- **Direct financial support:** Community members (92, including 30 women) serving as community ecoguards and tourist guides (**28 at GKNP, 32 at KBPPA, 20 at CSPPA, and 12 at SNP**) are receiving regular stipends. Furthermore, eight community members are receiving direct financial support through their work with the Sapo Ecolodge.

Through SCNL, **40 community ecoguards** are supported by a WCF-coordinated project at Gola Forest National Park (GFNP) and additional **24 female community ecoguards** have been recruited at Gola Forest National Park, Foya Proposed Protected Area, and Lake Piso Sustainable Multiple use Reserve. At all locations additional community members are benefitting when participating in the forest patrols as porters, cooks and guides.

- **Beekeeping:** WCF's partner Universal Outreach Foundation (UOF) continued their extension visits to the **223 beekeepers at GKNP and 84 beekeepers at KBPPA**. UOF and their partner Liberia Pure Honey continue to buy the honey from local beekeepers at a very good price (above the local market price) and are also linking beekeepers with the Association of Liberian Beekeepers. This support continues to create substantial benefits for beekeepers, and the beekeepers around KBPPA benefitted from additional training in 2022, at which time they made their first major honey harvests and sales.

The first 12 beekeepers who conducted their first major harvest produced over 50 liters of honey. Some was kept for personal consumption, while the group sold approximately 43 liters, with an income generated of 31,575 Liberian dollars (~\$208 USD). The community beekeepers act as stewards for the forest by educating their fellow community members on the importance of forest biodiversity for now and for future generations. The honey is packaged and sold in supermarkets and to upscale restaurants and hotels in Monrovia.



*Beekeepers at Krahn-Bassa Proposed Protected Area displaying their first honey harvest.*

- **Infrastructure:** During the first half of 2022, the construction of **five hand pump water wells** (one in Zroo/GKNP and four in Solo Town, Wiah Town, Jellue Town and Kolatree/KBPPA) was completed in collaboration with the Rural Integrated Development Association (RIDA).



*Newly constructed hand pump water well in Kolatree / Krahn-Bassa Proposed Protected Area.*

WCF supported the **installation of a mobile phone network tower** to help to remove communication barriers in Gboe-Geewon Town, a forest fringe community of KBPPA. The installation of the mobile network followed appeals from community members around the KBPPA for communications access and alternative livelihoods. The mobile network receiver was installed in May 2022. The initiative was implemented by the Africa Mobile Network, Liberia and Lonestar Cell/MTN a telecommunications company, with logistical and financial support from WCF.



*Gboe-Geewon residents helping with the installation of the GSM mobile network satellite receiver.*

- **Community-based ecotourism at Sapo National Park:** Following the official opening of the Sapo Ecolodge in late 2021, the ecolodge construction was completed and is now comprised of three chalets, two tent platforms, a dining platform, two additional washrooms, and a kitchen for tourist's food preparation was completed in March 2022. Further small improvements were made by a British volunteer in November and December 2022 and four solar street lights were erected at Jalay Town, the entry point for the tourists to reach the Sapo Ecolodge. The Sapo Ecolodge received its first visitors in 2022; from January to December, **25 visitors enjoyed the tourist experience**, even though no active promotion had yet been made to attract more tourists. The ecolodge will stimulate local empowerment by generating revenue to benefit the forest-fringe communities. Community members have been employed as security guards, cooks, housekeeping staff, and tourist guides, while other community members are benefitting from providing services such as providing fresh produce for the ecolodge food preparation, entertainers in a cultural troupe, or porters.

In April 2022, WCF's tourism expert based at Tai National Park in Côte d'Ivoire visited the Sapo Ecolodge to consult on possible improvements to enhance the tourist experience, and to increase the professionalism of the service provided. Systems were put in place for the ordering of supplies and training for the preparation of western-style dishes. A menu was created, and the catering staff were further trained on service expectations. A pricing scheme was determined for accommodation, park entry, and different visitor's activities, alongside a record-keeping log for SNP headquarters to maintain. Potential sites of interest for tourists were explored, as well as the determination of forest trail routes.

The hospitality staff, community tourist guides, and cultural troupe were all observed and advised on professional conduct to improve the tourist experience.

Since October 2022, two long-term interns from the Forestry Training Institute are permanently based at SNP, in order to receive intense training on ecotourism, and to support the operations of the Sapo Ecodge and other tourism activities.

In September 2022, a **Memorandum of Understanding (MoU) was signed between the FDA and WCF**, outlining the responsibilities of both parties and the co-management structure involving local communities. In November 2022, the signed MoU was presented with FDA to the six communities around SNP, who are the main beneficiaries of the Sapo Ecodge and the overall tourism activities. Explanation was provided on the future co-management system of the Sapo Ecodge with the FDA, WCF, and local communities as partners. WCF is collaborating with the tourism company Solimar International in regard to the marketing of Sapo Ecodge and the development of the business plan.

In November 2022, training was held at Sapo National Park (SNP) headquarters for tourist guides and tourist ecoguards who started to patrol in the newly established tourism zone inside SNP. The training showed how to identify a selection of tourist attractions for sightseeing in the tourism zone, and how to work with tourists professionally. The tourist guides and community ecoguards were also provided with (further) SMART training to enable them to collect data on wildlife and illegal activities whilst carrying out their forest activities. Seven tourist guides and four FDA staff participated in the training, along with five tourist ecoguards who benefited from the SMART data collection revision.

The two newly formed Sapo community ecoguard and tourist guide teams commenced patrols in December 2022; where they carried out two patrols in the new tourism zone inside Sapo National Park. During the patrols, the teams covered a total distance of **49 km**, over 10 patrol days, or 90 person days. During the patrols, the teams observed **65 signs of human activities** (of which 74%, or 48 were hunting related) resulting in an encounter rate of **1.3 signs/km**. The teams made **97 wildlife observations**, including observations of key species, such as western chimpanzee, forest elephant, pygmy hippopotamus, and various threatened monkey and duiker species.



*A group discussion after the first Sapo tourist zone patrol.*

As part of maintaining a long-term commitment to support ecotourism activities at SNP by supporting local communities, in particular women, **WCF collaborated with the local NGO Self-Help Initiative for Sustainable Development (SHIFSD)**, to enable literacy, numeracy, leadership, and entrepreneurship skills in training for ten women living on the edge of SNP. The women are establishing a local women-led conservation enterprise that will involve the management of the newly opened Sapo Ecolodge, the creation of a community entertainment center, and agriculture projects for the production of fruit and vegetables for tourists and other clients. Four of the women are already providing catering and cleaning services to the Sapo Ecolodge, and one local woman who was trained by SHIFSD as training facilitator for the other ten women is also a trained tourist guide for activities in the park. Prior to the six-month intensive course, most of the women had little or no literacy or numeracy skills, but have now graduated with the ability to read, write simple sentences, and perform basic calculations. The participants were also instructed in understanding the needs of tourists, developing leadership, and health and sanitation standards.



*Women from communities around Sapo National Park displaying their new literacy skills and receiving a certificate of training completion.*

Sapo Ecolodge was also promoted by WCF at LIBFEST 2022; an annual Liberia tourism festival that was launched this year.

#### **4. Pre-gazettement activities at Krahn-Bassa Proposed Protected Area**

Due to a major funding gap during the first half of 2022, the pre-gazettement activities at Krahn-Bassa Proposed Protected Area (KBPPA) had to be put on hold and could only continue in August 2022 after additional funding was secured. Before pre-gazettement activities in the field could restart, series of **high-level meetings involving key stakeholders**, including various ministries and lawmakers had to be held and a high-level delegation had to hold meetings in key communities around KBPPA. However, due to seasonal poor road conditions, these meetings could only happen in early November 2022. The **participatory land-use mapping** continued after these meetings and is 90% completed. In the meantime, additional projects have started targeting the KBPPA landscape, with few communities being reluctant with regard to the gazettement, and the activities remain challenging in a context where there is a high level of conflict of interest between conservation and commercial forest use. Furthermore, the collaboration between the FDA and the Liberia Land Authority (LLA) had to be improved before the work around KBPPA could be efficient again, which however only happened in December 2022.

A major issue around KBPPA is the lack of presence of FDA staff in the ground, and resulting gaps in the direct and continuous interaction with local community members. Fortunately, a new FDA Chief Park Warden was assigned in October 2022, and WCF recruited seven long-term interns who are based around KBPPA to set up wildlife clubs in 23 schools and to ensure daily interaction with local communities.

In November 2022, a team of FDA, WCF, and KBPPA community ecoguards engaged local community members in four towns through kickball and soccer games, and at the same time raised awareness about the creation of the future national park.



*Kickball and soccer teams comprised of FDA, WCF and local community members during community engagement activities at Krahn-Bassa Proposed Protected Area in November/December 2022.*

In order to ensure early engagement with lawmakers prior to the expected submission, FDA and WCF worked with the **Senate Committee on Agriculture, Forestry and Fisheries, to organize a legislative forest dialogue on KBPPA**, and to ensure all key lawmakers are informed and supportive of the gazettement process for KBPPA. The dialogue was held on 18 November 2022, and the response from the lawmakers was overall positive. However, strong requests were made to ensure adequate livelihood support, and to ensure the development of a co-management framework for local communities, as well as benefit-sharing agreements.



*Attendees of the legislative forest dialogue on Krahn-Bassa Proposed Protected Area in November 2022.*

## 5. Awareness raising

Besides the regular awareness raising meetings conducted by the community ecoguards and the awareness activities, additional programs and events were promoted.

In March 2022, in the framework of a women-led awareness project to promote the protection of western chimpanzees, the **ex-bushmeat sellers drama team went on a national tour to ten major bushmeat market hubs** across Liberia. Over a period of two weeks, the team's drama performance focused on explaining the importance of chimpanzees and the national and international laws to protect them. The drama team also encouraged bushmeat sellers and everyone involved in the bushmeat trade to stop, and to engage into more sustainable and legal alternatives instead. FDA and WCF have worked with **34 women bushmeat sellers who serve as community volunteers** by raising awareness about protected species and the wildlife law in the various market areas. From this group, 27 women have abandoned the bushmeat business, those still found to sell bushmeat were excluded from the community volunteer program.



*The nationwide drama tour of 10 major bushmeat hubs drew many public spectators (left) and the ex-bushmeat sellers drama team during their performance in Kakata (right).*

In 2022, **World Pangolin Day, World Wildlife Day, World Environment Day** and **World Chimpanzee Day** were celebrated by WCF and partners. The programs involved government representatives, speakers from several conservation organizations, and students from several high schools. On two occasions, the ex-bushmeat sellers drama team performed pieces on protected species and the National Wildlife Conservation and Protected Area Management Law.

In June 2022, the staff from the WCF Zwedru Field Office conducted awareness in eight high schools across Zwedru, to educate students on the importance of conserving wildlife and its habitat. The activity was to celebrate **World Environment Day**, and Zwedru was selected, as it is one of the main centers of the bushmeat trade in Liberia. Factors undermining conservation in Liberia were outlined; poaching, mining, farming, and illegal harvesting of chewing sticks in the adjacent GKNP. The students were encouraged to take interest in nature and help spread the conservation message. Additionally, the key benefits resulting from conservation were shared. Forest-edge communities that can and do benefit from alternative livelihoods to substitute forest resources use for their wellbeing were explained. Liberia's tourism potential was explored to inspire the next generation to plan for sustainable forest use.



*High school students in Zwedru received copies of the WCF “Forest Wisdom” conservation magazine on World Environment Day.*

In July 2022, the **World Chimpanzee Day** was celebrated at Rally Time Marketplace, a major bushmeat hub, where members of the public were exposed to the importance and plight of chimpanzees in Liberia.



*World Chimpanzee Day celebration at Rally Time market in central Monrovia, targeting market superintendents and bushmeat sellers, with a high-level presence from USAID and the European Union.*

On 18 December **LIBFEST2022**, a new annual **Liberian cultural festival held in Monrovia** showcased Liberia’s tourist offerings and investment potential, as well as educating the Liberian public on the importance of tourism. The event was organized by the Liberia National Tourism Association (LINTA) and supported by WCF, who led the ecotourism team for the event.



*WCF representing Sapo Ecodge at LIBFEST 2022.*

## **6. Coordination of Law Enforcement Sub-Committee of the Species Working Group of Liberia and Combatting Illegal Wildlife Trade**

WCF continued to coordinate the **Law Enforcement Sub-Committees of the Species Working Group of Liberia**, hosted by the FDA until September 2022, when WCF stepped down from the coordination. Between January and the end of April 2022 three meetings were organized and hosted by WCF. During the meetings, key partners involved in activities aiming to reduce illegal wildlife trade and to improve law enforcement gave updates and coordinated with other partners.

In close collaboration with FDA, the Environmental Protection Agency (EPA), the Ministry of Justice (MoJ), the Liberian National Police (LNP), Liberia Chimpanzee Rescue and Protection (LCRP), Fauna & Flora International (FFI), and Libassa Wildlife Sanctuary (LiWiSa), WCF continued to support initiatives combating wildlife crime, in particular through the activities of the **Wildlife Crime Task Force (WCTF)** until April 2022, when the project for this activity ended. In March 2022, in collaboration with FFI and RSPB, an intense training for a newly established wildlife crime database was conducted. At the end of the project, an evaluation workshop was conducted, in order to appraise the performance of the WCTF, review the Terms of Reference and suggest potentially needed changes. In June 2022, an event was organized with donors and partners to present the progress made by the WCTF over the past years. The establishment and operations of the WCTF, spearheaded by the Wildlife Confiscation Unit of the FDA, has led to a **significant increase of wildlife confiscations, arrests of suspects, and conviction of those who were found guilty of wildlife crime**. After the end of the regular support for the WCTF, WCF provided specific support for a few missions linked to wildlife crime observed in WCF's operational areas in the southeast of Liberia.

In close collaboration with the Jane Goodall Institute, WCF conducted a pilot survey with hunters around GKNP and the forest corridor linking GKNP and SNP, in order to develop a behavior change campaign, which will be rolled out in 2023 and should target hunters in order to reduce poaching.

Following a bushmeat consumption survey conducted by WCF and Forestry Training Institute interns in 2019 and 2021 in Monrovia and surrounds, the survey was expanded, in collaboration with FDA and RSPB to cover bushmeat hubs nationally. Thirteen student interns from the Forestry Training Institute conducted an initial survey in 17 markets across Liberia where it is known that bushmeat is sold. Data was collected through interviews with 97 female bushmeat sellers, and 10 initial markets were selected for participation in the Community Volunteer Program, in which, under the support of WCF, over the next 2 years, 300 women bushmeat sellers are expected to cease their illegal business and raise awareness about protected species and the wildlife law in the various market areas.

## **7. Capacity building**

In 2022, besides providing training opportunities for WCF staff, WCF continued to **train FDA, community members, and internship students** from the Forestry Training Institute and other academic institutions. In total of **33 interns** were hosted by WCF and participated in the various field and office activities. Two interns are now fully focused on administrative tasks, one in each of the offices in Monrovia and Zwedru, whereas seven long term interns are supporting activities with communities related to the pre-gazettement of KBPPA.

In October 2022, two graduates from the Forestry Training Institute started a long-term internship with the Sapo Ecododge and the Sapo ecotourism activities, whereby they commenced with tourist zone patrol training in November alongside seven tour guides, five community ecoguards, and four FDA rangers. From June to August 2022, seven interns from Tubman University were engaged in conservation activities based from the Zwedru office. During their stay they learned the basics of conservation, park management, survey methods, planning an ecological survey, uses of SMART, and the use of GPS and compass. The seven interns worked around the GKNP and KBPPA and participated in community ecoguard patrols.

In June and July 2022, WCF, RSPB, and SCNL conducted intense training on protected area management and law enforcement with 120 FDA staff working at the (proposed) protected areas in Liberia. Each group of 60 trainees received 20 days of training, which was conducted close to Gola Forest National Park. The training comprised all aspects of protected area management; from reporting and staffing, biomonitoring, community engagement, to patrols; including law enforcement and surveillance patrols, including the community ecoguard program. It is hoped that this training will help to improve the protected area management effectiveness and practices in Liberia.



*Participants in the protected area management training for 120 FDA staff, conducted in collaboration with RSPB and SCNL in June and July 2022.*

**Training to build capacities within the WCF team in 2022 included:**

- WCF and FDA staff members attended a collaborative workshop hosted by the Jane Goodall Institute and Impact by Design to develop effective behavior change campaigns for improved chimpanzee conservation in southeastern Liberia.
- The WCF Community Engagement and Ecotourism Officer attended a botanical training course at the Forestry Training Institute, where she learned how to identify important medicinal plants.



*Trainees prepare plant samples for the herbarium at a botanical training course at the Forestry Training Institute (left), and a community ecoguard team leader tutoring intern students on field methods during a patrol (right).*

- In September 2022, two WCF staff members attended a 3-day workshop on improving grassroots capacities hosted by the United Nations Development Program (UNDP).
- WCF's Administration & Finance Manager conducted intense QuickBooks training for all WCF admin staff in early July and October 2022.
- In September, the WCF Field Coordinator attended an advanced data officer and administrator training course using SMART (Spatial Monitoring and Reporting Tool) software, hosted by the Zoological Society of London (ZSL) in Nairobi, Kenya. Participants from nine different African countries attended, where they learned advanced skills in using the monitoring software. This training will lead to improved reporting of illegal human activities and wildlife distribution in (proposed) protected areas throughout Liberia, as the WCF Field Coordinator will bring his knowledge to WCF's partners.



*WCF Field Coordinator presenting a SMART report from Grebo-Krahn National Park, showing how SMART is implemented by WCF and partners in Liberia at an international training session in Nairobi.*

## **8. Acknowledgements**

The WCF Liberia team is grateful to its partners in Liberia, in particular the Forestry Development Authority, who has been by WCF's side for the implementation of all projects. Other partners in Liberia with whom projects have been implemented and whom we wish to thank, in no particular order, are: Environmental Protection Agency, Ministry of Internal Affairs, especially represented through the Superintendents in Grand Gedeh, River Gee, Sinoe and Rivercess Counties, Ministry of Information, Cultural Affairs and Tourism, Ministry of Justice, Liberia National Police (Transnational Organized Crime Unit, Interpol), Eddie Theater Production, Forestry Training Institute, Jane Goodall Institute, University of Liberia, Paynesville and Monrovia City Corporations, Society for the Conservation of Nature of Liberia, Royal Society for the Protection of Birds, Fauna and Flora International, Liberia Chimpanzee Rescue and Protection, Libassa Wildlife Sanctuary, Universal Outreach Foundation.

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## **Annual Report 2022 – WCF Guinea**



**Conakry / Guinea**

**January 2023**

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**Acronyms**

AGEE	Guinean Agency for Environmental Assessment
CBG	Compagnie des Bauxites de Guinée
CG	Corridor Grid
CVCD	Comité Villageois pour le Conservation et le Développement (village committee)
DS	Distance Sampling
FMNR	Farmer Managed Natural Regeneration
FPIC	Free Prior and Informed Consent
GAC	Guinea Alumina Corporation
GIE	Economic Interest Group ( <i>Groupement d'Intérêt Economique</i> )
IMET	Integrated Management Effectiveness Tool
IMP	Income Maintenance Plan
MBNP	Moyen-Bafing National Park
MEDD	Ministry of Environment and Sustainable Development
NASA-FIRMS	National Aeronautics and Space Administration, Fire Information for Resource Management System
NDWF	Direction Nationale des Eaux et Forêts
NER	Natural Ecological Regeneration
NGO	Non-Governmental Organization
NPAA	National Protected Area Authority
OGPNRF	Guinean Office of National Parks and Fauna Reserves ( <i>Office Guinéen des Parcs Nationaux et Réserves de Faune</i> )
OKKPSS	Outamba-Kilimi-Kuru-Pinselli-Soyah-Sabouyah
PAPFor	Support programme for the preservation of forest ecosystems in West Africa
PDL	Local Development Plan ( <i>Plan de Développement Local</i> )
PPP	Public-Private Partnership
PSSNP	Pinselli-Soyah-Sabouyah National Park
SECR	Spatially Explicit Capture-Recapture
SMART	Spatial Monitoring and Reporting Tool
TCS	Tacugama Chimpanzee Sanctuary
UCOMB	Unité de Coopération pour l'Offset Moyen-Bafing
UC	Union Communale
USAID	U.S. Agency for International Development
VLMP	Village Land Management Plan
WCF	Wild Chimpanzee Foundation
WCS	Winning Consortium Simandou
WCSR	Winning Consortium Simandou Railway
ZIP	Strict reserve zone ( <i>Zone Intégralement Protégée</i> )

## 1. Executive summary

In Guinea, the WCF has pursued sustainable management activities for the Moyen-Bafing National Park (MBNP), which as of May 4 2021, is in a transition phase (after a four years of establishment) before the management phase. The MBNP project is financially mainly supported by a chimpanzee offset project following an International Finance Corporation scheme for two important mining companies operating in Guinea. Since 2021, the WCF Guinea is also working in the transboundary Outamba-Kilimi-Kuru-Pinselli-Soyah-Sabouyah (OKKPSS) landscape in Guinea and Sierra Leone, where the Pinselli-Soyah-Sabouyah National Park (PSSNP) is in its creation process phase. The OKKPS project is mainly funded by the European Union through the PAPFor programme (*Support programme for the preservation of forest ecosystems in West Africa*).

The Moyen-Bafing National Park was officially created in May 2021 with the signature of a presidential decree. In 2022, WCF Guinea conducted 86 surveillance patrols (total of 10,983 km) resulting in arrests, seizures, and prosecutions for illegal logging and bushmeat hunting activities and organised nine capacity-building workshops for law enforcement agents. Fire management activities, as for previous years, were conducted to protect the High Conservation Value areas within the park with the involvement of 11,820 community members. Sadly, deforestation rate within the park remains higher than our present Natural Ecological Regeneration (NER) efforts, although the growth rate from two NER sites revealed a survival rate of 95 to 100.6%. The MBNP was discovered to host the world's largest known stand of *Calophyllum africanum*, a critically endangered tree species growing in gallery forests.

The abundance and density of chimpanzees and four indicator species (bushbuck, red-flanked duiker, vervet monkey, and warthog) were estimated according to the main habitats present in the park. The MBNP is possibly inhabited by 3,246 chimpanzees (range = 2,186 to 4,854) with an estimated density of 0.74 individual / km<sup>2</sup> (range: 0.50 - 1.11).

In 2022, 4,758 community members are actively participating in the management of the MBNP through a multilevel committee structure. A total of 2,163 people organised into 72 cooperatives for vegetable gardening, agriculture, apiculture, and shea butter production are benefitting from WCF technical, training, and material support. Total sales (of gardening vegetables, honey, and shea butter) reached 303,978,900 GNF (~35,202 USD). Ninety-two Farmer Managed Natural Regeneration fields maintained by community members were supported by WCF, from which 3,825 trees were preserved.

In 2022, WCF Guinea implemented various outreach activities in the MBNP: (i) 54 *Cercles d'écoute* ("listening circles") reached 3,441 people in 149 villages, (ii) a fifth theatre tour in five villages with the participation of 2,099 people, (iii) the Club PAN program in 10 schools for 900 children, (iv) five TV broadcasts, (v) 35 radio broadcasts; and (vi) 23 articles published online.

Following the official creation of the Moyen-Bafing National Park, it is planned to introduce a new management governance through a Public-Private-Partnership (PPP), which will bring the management up to the international best practice level. This will include a tender process led by the Ministry of Environment and Sustainable Development ("Ministère de l'Environnement et du Développement Durable" - MEDD) to select a long-term operator for the park. The WCF has worked with MEDD and our long-term partner the OGPNERF "Office Guinéen des Parcs Nationaux et Réserves de Faune" to organise this transition.

As part of the OKKPSS project, WCF Guinea, in support of the Guinean government, is working towards the creation process of the Pinselli-Soyah-Sabouyah National Park. Important progress was made in September 2022 with the signature of a ministerial decree (N°A/2022/2316/MEDD/SGG) by the Minister of the MEDD launched officially the PSSNP creation process, that specified the provisional limits of this future park and its management modalities during the creation process phase. First consultation meetings took place to obtain Free Prior and Informed Consent (FPIC) from local communities in the four communes of the future park.

A biomonitoring survey using the method of systematic linear transects and standardised camera traps was conducted from March to November 2022. Based on 163 walked line transects, the encounter rates of chimpanzee, forest elephant, primate species, bovid species, and anthropogenic activities were estimated. A total of 82,320 videos were analysed from 250 camera traps, of which 284 were videos of chimpanzees.

In 2022, WCF conducted 18 surveillance patrols in the proposed PSSNP (911 km) and organised 11 capacity-building workshops on biomonitoring and patrolling techniques, law enforcement, and protected area management. WCF launched the livelihood support activities with the creation of 15 cooperatives for market gardening and agriculture (612 community members), the identification of seven market garden fields (6.58 ha) and six FMNR fields (6.35 ha) to be supported during the 2023 agricultural campaign, and the organisation of training on sustainable agro-ecological practices.

Finally, outreach activities were implemented in the proposed PSSNP as follows: (i) seven *Cercles d'écoute* reached 207 people (including 80 women) in 34 villages, (ii) 36 'picture boxes' awareness sessions reached 1,336 people (including 614 women) in 36 villages, (iii) seven TV broadcasts, (iv) 15 radio broadcasts, and (v) 15 articles published online.

In addition to the illegal trade of rosewood (*Pterocarpus erinaceus*), a major threat to the future park comes from the construction of a railway line by two major mining companies, Winning Consortium Simandou (WCS) and Rio Tinto-Simfer, which will transect the future park from the east to west. The construction work is planned to last for four years and threatens to divide the park in two, blocking all animal movement and increasing fragmentation. The WCF with the MEDD and the OGPNERF has been in permanent contact with the two companies to implement of a strong mitigation plan. WCF organised with the MEED two important workshops including the mining companies in May and in December 2022 to propose an operational plan for 2023. In addition, WCF with OGPNERF has conducted monthly missions in the park along the train track to monitor the construction activities and the implementation of the mitigation hierarchy. Reports have been presented with proposals on how to improve their mitigation plans, including implementing animal-friendly crossings along the 112 km of the railway line.

## **2. Moyen-Bafing National Park**

May 2021 was marked by the official creation of the Moyen-Bafing National Park (MBNP) with the signature of a presidential decree. The main objective of WCF Guinea is now to help with the establishment of a park management unit through a Public-Private Partnership (PPP) contract, and to simultaneously pursue sustainable management activities of the MBNP.

## 2.1. Surveillance and law enforcement activities

To better communicate the zoning plan of the MBNP and the management rules, 13 boundary signposts and 33 boundary markers were installed over 194 kilometres of the external limits of the MBNP. Additionally, 26 signposts displaying the fully- and partially-protected species of Guinea, including the illegal penalties associated with infractions were installed at 13 sites this year (checkpoints and gendarmerie barriers).

A total of **86 patrols** (average of 7.17 patrols per month, range = 0-13) led by teams comprised of mixed WCF community ecoguards and OGPNRF agents (5-6 people per team) were conducted from January to December 2022. Ten of fourteen management zones of the Moyon-Bafing National Park (Dara, Laffa Boubhè, Kansangui, Felo Koundoua, Kela, Ndire Yangueya, Coyah, Kegneoula, Kollet, Nguessaoula) were covered with a total of **10,983 km** patrolled. On average, 48.4% of the MBNP were covered quarterly (min: 9.6% max: 84.7%). The objective of the surveillance patrols was to monitor and record all observations on wildlife and illegal activities, as well as to enforce the law through seizures and arrests by state officers.



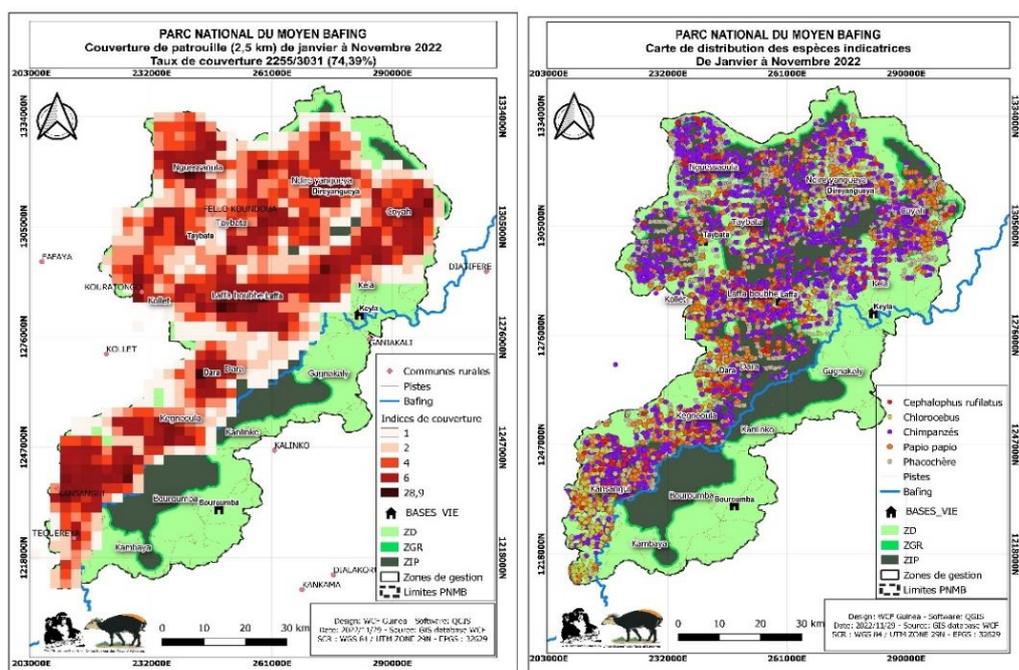
*WCF female community ecoguard team*

A total of **26,279 observations of medium to large mammals** were recorded from January to December 2022, of which 714 were direct observations, and 38 mammal species were detected. Note that 13,648 of these observations were from the common warthog (*Phacochoerus africanus*), corresponding to 52% of total observations. The encounter rates for each species are presented in Table 1. The common warthog was the species with the highest encounter rate (1.24 signs/km) followed by chimpanzee (*Pan troglodytes verus*, 0.38 signs/km), Guinea baboon (*Papio papio*, 0.31 signs/km), and crested porcupine (*Hystrix cristata*, 0.19 signs/km). Animal signs were mainly recorded in the strict reserve zone (ZIP: *Zone Intégralement Protégée*) and in the resource management zone (ZGR: *Zone de Gestion des Ressources*).

A total of **595 signs of illegal activities** were recorded in 2022. Among these illegal activities, agriculture was the main threat (average of 0.034 signs/km), followed by traditional farming (0.014 signs/km), non-timber exploitation (0.009 signs/km), logging (0.003 signs/km), and poaching (0.001 signs/km). In 2022, **13 arrests** accompanied by seizures were made by *Brigade* agents, OGPNRF agents, and *Cantonnement* agents both within and outside the MBNP. Three cases of bushmeat possession (19 bags seized in total), five cases of illegal logging, two cases of killing a protected species (three hippopotamus), one case of camera trap theft and killing a protected species (crocodile), one case of drug trafficking, and one case of the death of a man by a hippopotamus. To discourage illegal activities in the MBNP, the OGPNRF agents destroyed 10 hunting camps.

**Table 1.** Direct and indirect observations of medium to large sized mammals recorded between January and December 2022 during ecoguard missions in the Moyen-Bafing National Park.

	Common name	Scientific name	Dir Obs	Ind Obs	Total Obs	Enc. Rate (signs/km*100)
1	African clawless otter	<i>Aonyx capensis</i>	1	9	10	0.09
2	Brush-tailed porcupine	<i>Atherurus africanus</i>	0	29	29	0.26
3	Marsh mongoose	<i>Atilax paludinosus</i>	0	18	18	0.16
4	Side-striped jackal	<i>Canis adustus</i>	20	757	777	7.07
5	African golden cat	<i>Caracal aurata</i>	0	9	9	0.08
6	Caracal	<i>Caracal caracal</i>	3	28	31	0.28
7	Black duiker	<i>Cephalophus niger</i>	1	33	34	0.31
8	Red-flanked duiker	<i>Cephalophus rufilatus</i>	21	216	237	2.16
9	Yellow-backed duiker	<i>Cephalophus silvicultor</i>	6	104	110	1.00
10	Sooty mangabey	<i>Cercocebus atys</i>	1	9	10	0.09
11	Campbell's monkey	<i>Cercopithecus campbelli</i>	10	22	32	0.29
12	Green monkey	<i>Chlorocebus sabaesus</i>	83	242	325	2.96
13	African civet	<i>Civettictis civetta</i>	3	67	70	0.64
14	King colobus	<i>Colobus polykomos</i>	4	6	10	0.09
15	Spotted hyaena	<i>Crocuta crocuta</i>	0	2	2	0.02
16	Patas monkey	<i>Erythrocebus patas</i>	78	507	585	5.33
17	Northern lesser galago	<i>Galago senegalensis</i>	1	2	3	0.03
18	Common genet	<i>Genetta genetta</i>	0	16	16	0.15
19	Egyptian mongoose	<i>Herpestes ichneumon</i>	1	2	3	0.03
20	Hippopotamus	<i>Hippopotamus amphibius</i>	1	5	6	0.05
21	Crested porcupine	<i>Hystrix cristata</i>	2	2,037	2,039	18.56
22	White-tailed mongoose	<i>Ichneumia albicauda</i>	0	2	2	0.02
23	Defassa waterbuck	<i>Kobus ellipsiprymnus defassa</i>	1	179	180	1.64
24	Serval	<i>Leptailurus serval</i>	0	2	2	0.02
25	Honey badger	<i>Mellivora capensis</i>	1	4	5	0.05
26	Gambian mongoose	<i>Mungos gambianus</i>	0	32	32	0.29
27	Western chimpanzee	<i>Pan troglodytes verus</i>	23	4,105	4,128	37.58
28	African leopard	<i>Panthera pardus</i>	1	16	17	0.15
29	Guinea baboon	<i>Papio papio</i>	222	3,198	3,420	31.14
30	Common warthog	<i>Phacochoerus africanus</i>	204	13,444	13,648	124.26
31	White-bellied pangolin	<i>Phataginus tricuspis</i>	0	2	2	0.02
32	Maxwell's duiker	<i>Philantomba maxwellii</i>	0	25	25	0.23
33	Red river hog	<i>Potamochoerus porcus</i>	3	104	107	0.97
34	Rock hyrax	<i>Procapra capensis</i>	0	3	3	0.03
35	Giant ground pangolin	<i>Smutsia gigantea</i>	0	2	2	0.02
36	Common duiker	<i>Sylvicapra grimmia</i>	1	17	18	0.16
37	African buffalo	<i>Syncerus caffer</i>	0	29	29	0.26
38	Bushbuck	<i>Tragelaphus scriptus</i>	22	281	303	2.76
<b>Total</b>			<b>714</b>	<b>25,565</b>	<b>26,279</b>	



*Coverage and intensity of patrols conducted in ten of the fourteen management zones in the Moyen-Bafing National Park in 2022, with darker red colour representing grid cells with higher patrol efforts (left) and indicator species including chimpanzee signs (right) recorded during ecoguard missions.*

A study on bushmeat hunting was carried out from January 2021 to July 2022 on 379 hunters in 121 villages of the MBNP to understand the socio-economic characteristics of local hunters and the hunting dynamics in the park. Local hunters hunt for three reasons: eating and selling (46.1%), only eating (44.5%), and only selling (7.5%). A total 36 species were recognised as targeted for hunting. The most frequently targeted species were bovids with Maxwell's duikers (16%, *Philantomba maxwellii*), red-flanked duikers (16%, *Cephalophus rufilatus*), and yellow-backed duikers (15%, *Cephalophus sylvicultor*), followed by crested porcupine (9%, *Hystrix cristata*), brush-tailed porcupine (7%, *Atherurus africanus*), and bushbuck (6%, *Tragelaphus scriptus*). Of the 379 hunters surveyed, 83% had no hunting permit.

## 2.2. Law enforcement capacity building

Nine training workshops were organised by WCF for different state actors, protected area managers and authorities, and MBNP teams in 2022:

- 1) 3-4 February 2022, a capacity-building workshop on **natural resource management** was organised in Mamou for the presentation of the MBNP activities over the 2018-2021 period. The workshop focused on the different steps of the MBNP creation process and on the implemented management activities. Seventy-three people participated including the Governor of Mamou, executives from the MEDD, OGPNRF, NDWF, and local authorities.
- 2) Following a series of workshops organised in 2019, 2020, and 2021 in relation to **illegal wildlife crime**, a new capacity building workshop was organised by the NGO WARA Conservation Project in collaboration with WCF from 25 to 28 May in N'zérékoré. A total of 70 persons, composed of various state agents participated. The goal of this workshop was to increase knowledge and understanding of illegal wildlife crime, improve the collaboration between the different services involved, and ensure that the *Brigade* is operational and proficient in fighting wildlife crimes.

- 3) Three workshops on **protected area monitoring and evaluation** were organised in April, July, and October for 17, 15, and 11 attendees respectively, including the heads of other Guinean protected areas. The objective of these workshops was to present the quarterly results obtained in the Moyen-Bafing National Park, and to highlight the difficulties encountered to formulate recommendations for improving management efficiency.
- 4) Two training sessions on **patrolling techniques** (driving of motorbikes, safety rules, and use of the SMART software) were organised for 28 WCF staff, with the goal to reinforce patrol security and efficiency and improve data collection in the field.
- 5) From 21 to 23 November, training on **environmental and social communication** was organised in Labé for 25 WCF staff members. The goal was to train WCF staff on how to effectively carry out and assess an awareness raising campaign to induce a positive behaviour change in local communities (e.g. stop wildfires or poaching) and facilitate the acceptance of the project activities.
- 6) The MBNP project conducted a second **evaluation of its management efficiency** using the IMET tool (Integrated Management Effectiveness Tool) from 1 to 6 September in Mamou, and obtained the satisfactory score of **68.14%**, a marked increase of 4.79% from last year's score of 63.35%.



*Workshop on illegal wildlife crime in N'zérékoré (left) and training on environmental and social communication in Labé (right)*

### 2.3. Wildlife biomonitoring

Biomonitoring in the Moyen-Bafing National Park has been refined over the past years to provide improved precision of wildlife population estimates, as compared to the traditional line transect methodology. Multiple camera trap grid designs were installed throughout the park:

- 1) **Distance Sampling design** (DS; 215 camera traps) to estimate wildlife populations within the entire park. camera traps are installed and rotated throughout the park every 6-8 months between three sectors (northwest, northeast, and south) following a habitat stratification approach;
- 2) **Spatially Explicit Capture-Recapture** (SECR; 106 camera traps) to identify all chimpanzee individuals and groups living in two areas of the park (Bakoun and Koukoutamba) and to be able to monitor chimpanzee population dynamics;
- 3) **Corridor Grids** (CG; 30 camera traps) to evaluate use of forest corridors between the Bakoun and Boula Classified Forests, and the wildlife populations therein.

The results of the Distance Sampling (DS) analysis are presented in Table 2 and show the abundance and density of chimpanzees and four indicator species (bushbuck, red-flanked duiker, vervet monkey, and warthog) according to the main habitats present in the park. The MBNP is possibly inhabited by **3,246 chimpanzees** (CV= 21%; range = 2,186 to 4,854 individuals) with an estimated density of 0.74 individuals / km<sup>2</sup> (range: 0.50 – 1.11 ind/km<sup>2</sup>). The gallery forest hosts the highest densities of all of the five species stressing the importance to regenerate the degraded gallery forests within the MBNP for the fauna.

**Table 2.** Abundance and density over the entire Moyen-Bafing National Park for chimpanzee, bushbuck, red-flanked duiker, vervet monkey, and warthog. The values are presented for the three main habitats used by animals in the park: gallery, open forests, and forested savannah. Note that grass savannah, bowal, and villages are not included here, as they are rarely, if ever, visited by the five species. This also explains why the total area in this table is smaller than the official MBNP surface area (4,373 km<sup>2</sup> instead of 6,767 km<sup>2</sup>).

<i>Chimpanzee</i>	Estimated abundance	Estimated density	CV	Confidence interval	Area (km <sup>2</sup> )
Gallery forest	1,179	1.82	22%	1.14 – 2.48	646.8
Open forest	1,683	0.69	36%	0.33 – 1.26	2,448.5
Forested savannah	384	0.30	32%	0.13 – 0.52	1,277.8
<b>Total</b>	<b>3,246</b>	<b>0.74</b>	<b>21%</b>	<b>0.50 – 1.11</b>	<b>4,373.1</b>

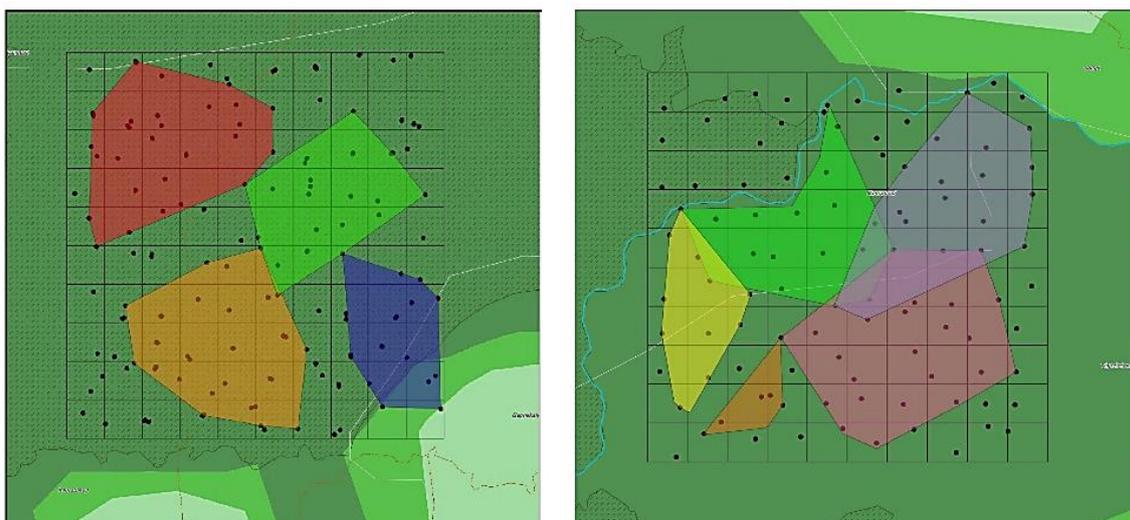
<i>Bushbuck</i>	Estimated abundance	Estimated density	CV	Confidence interval	Area (km <sup>2</sup> )
Gallery forest	1,237	1.91	28%	1.01 – 3.01	646.8
Open forest	3,121	1.28	22%	0.80 – 1.82	2,448.5
Forested savannah	645	0.51	24%	0.25 – 0.58	1,277.8
<b>Total</b>	<b>5,003</b>	<b>1.14</b>	<b>16%</b>	<b>0.84 – 1.55</b>	<b>4,373.1</b>

<i>Red-flanked duiker</i>	Estimated abundance	Estimated density	CV	Confidence interval	Area (km <sup>2</sup> )
Gallery forest	1,249	1.93	23%	1.15 – 2.73	646.8
Open forest	4,432	1.81	54%	0.70 – 4.48	2,448.5
Forested savannah	1,700	1.33	35%	0.68 – 2.36	1,277.8
<b>Total</b>	<b>7,381</b>	<b>1.69</b>	<b>34%</b>	<b>0.89 – 3.21</b>	<b>4,373.1</b>

<i>Vervet monkey</i>	Estimated abundance	Estimated density	CV	Confidence interval	Area (km <sup>2</sup> )
Gallery forest	1,410	2.18	26%	1.29 – 3.39	646.8
Open forest	3,096	1.26	20%	0.89 – 1.97	2,448.5
Forested savannah	1,184	0.93	18%	0.65 – 1.30	1,277.8
<b>Total</b>	<b>5,690</b>	<b>1.30</b>	<b>13%</b>	<b>1.01 – 1.68</b>	<b>4,373.1</b>

<i>Warthog</i>	Estimated abundance	Estimated density	CV	Confidence interval	Area (km <sup>2</sup> )
Gallery forest	1,516	2.34	22%	1.47 – 3.49	646.8
Open forest	4,923	2.02	21%	1.27 – 2.78	2,448.5
Forested savannah	2,738	2.14	16%	1.58 – 2.69	1,277.8
<b>Total</b>	<b>9,177</b>	<b>2.10</b>	<b>13%</b>	<b>1.64 – 2.69</b>	<b>4,373.1</b>

The Spatially Explicit Capture-Recapture (SECR) analysis resulted in the identification of **eleven chimpanzee groups**: six chimpanzee social groups in the Bakoun area (north of the park); including four fully identified, and two partially identified, and five chimpanzee social groups in the Koukoutamba area (south of the park); including two fully identified and three partially identified. This information will constitute the baseline data that will be used to monitor the chimpanzee population dynamics in the MBNP.



*Limits of the territories of the four fully identified chimpanzee social groups in the Bakoun area (left) and of the five chimpanzee social groups fully (in purple and yellow) and partially (in pink, green, and orange) identified in the Koukoutamba area (right)*

**Table 3.** Composition of the six chimpanzee social groups identified in the Bakoun area in May 2021 (for Bakoun G1 – 4) and in January 2019 (for Bakoun G5 – 6), plus the composition of the five chimpanzee social groups in the Koukoutamba area identified in March 2020. Note that chimpanzee social groups with an asterisk are only partially identified.

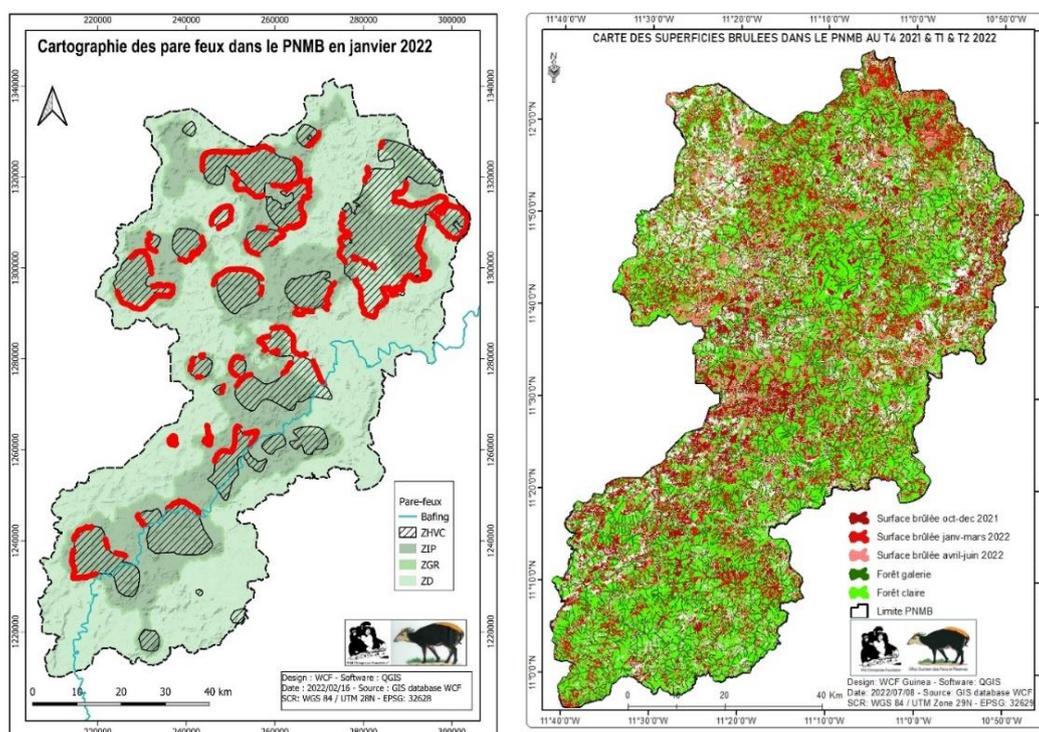
Life stage	Bakoun						Koukoutamba				
	G1	G2	G3	G4	G5*	G6*	G1	G2	G3*	G4*	G5*
Adult male	8	13	10	12	4	2	17	13	2	6	6
Adult female	9	15	6	10	7	7	8	14	6	4	5
Adolescent male	2	5	2	4	4	1	6	6	1	5	2
Adolescent female	1	1	3	1	0	3	5	1	0	1	1
Adolescent unknown	2	1	0	0	1	0	0	0	0	0	1
Juvenile male	1	2	3	0	0	3	2	0	0	0	3
Juvenile female	0	3	1	1	1	1	1	5	0	2	1
Juvenile unknown	3	5	2	4	3	0	4	5	1	1	2
Infant unknown	7	14	4	8	5	5	6	11	4	2	3
<b>Total</b>	<b>33</b>	<b>59</b>	<b>31</b>	<b>40</b>	<b>25</b>	<b>22</b>	<b>49</b>	<b>55</b>	<b>14</b>	<b>21</b>	<b>24</b>
Sex ratio (A♂/A♀)	0.89	0.87	1.67	1.2	n.a.	n.a.	2.1	0.93	n.a.	n.a.	n.a.
Adult/subadult	1.06	0.90	0.89	1.1	n.a.	n.a.	1.04	0.96	n.a.	n.a.	n.a.
Infant/Adult female	0.78	0.93	0.83	0.8	n.a.	n.a.	0.75	0.79	0.67	0.5	0.6

#### 2.4. Forest regeneration and wildfire management

Last year, WCF has transitioned entirely away from a tree transplantation approach to employing solely **Natural Ecological Regeneration (NER)**, given its superior efficacy as a reforestation method. To date, **661.48 ha** of land (from 21 sites in 18 villages) have been identified, of which 568.48 ha are benefitting from the forest regeneration efforts. No new NER sites were identified in 2022; however, four community agreements (four NER sites) were renewed for five years. Growth rate data are now being collected on **13,079 trees** within 15 NER sites and reveal from two sites a survival rate of 95 - 100.6% (a rate of >100% indicates full net survival and additional tree propagation) with a growth increasing from 44 cm in the second year to 134 cm in the third year.

Given the importance of managing wildfire risk to the viability of the NER sites, program activities are aligned to the dry/fire season calendar, beginning in October/November and ending with the onset of rains in May/June. At the onset of the fire season and with the participation of **11,821 community members**, **553.72 km of firebreaks** were created around high conservation value areas, and **373 prescribed burning activities** were conducted to prevent the further loss of forest cover. In addition, **2,563 people in 144 villages** participated in awareness sessions on the management of wildfires.

Analyses of burned areas throughout the MBNP indicate that 31.2% of the MBNP were burned during the 2021-2022 fire season (Source: Sentinel-2), of which 12.6% corresponded to the strict reserve zone (ZIP, *Zone Intégralement Protégée*) of the park. Nevertheless, between **74% – 81% of the high conservation value forests were protected** from wildfire damage during this fire season, which represents an important improvement compared to the fire season of 2020-2021 with 65% - 68%.



***Location of the 553.72 kilometres of firebreaks created to protect forested areas and NER sites (left), and map illustrating the surface of the MBNP burned (right)***

Since November 2021, a study is currently underway in the MBNP, with the long-term objective of determining whether carbon is being accumulated faster than it is being released into the atmosphere by the environment i.e., a **carbon sink**. To do this, it is first necessary to classify the different vegetation communities in the MBNP by installing representative plots, create a vegetation map, and extrapolate the amounts of carbon in each community by measuring above and below ground biomass and the percentage of organic carbon to obtain the carbon stock. To date, **129 vegetation plots** (of 155 planned) have been established in the main habitats of the MBNP, from which **845 samples** of vegetation (n = 496), soil (n = 338) and rock (n = 11) were collected for laboratory analysis to determine their carbon content and **3,763 trees** were identified, labelled, and measured. Preliminary results show that at least **36 tree species are acting as inorganic carbon sinks** (oxalate-carbonate pathways), which is a considerable number compared to other previously studied ecosystems.

As part of this study, the list of MBNP's plant species could be updated with **550 plant species** (including 34 with a threatened status: CR, EN, VU), compared to less than 300 in September 2021. The MBNP was discovered to host the **world's largest known stands of *Calophyllum africanum***, a critically endangered tree species growing in gallery forests.

## 2.5. Community consultative management framework

Efforts to protect wildlife and sustainably manage natural resources requires the cooperation and the participation of local communities living in the park. Hence, since 2018, WCF Guinea has been creating an organisational framework following a spatial hierarchy that allows for transparent and participative management. A total of **4,758 community members** are actively participating in the management of the park through a multilevel committee structure: 49 village committees (CVCD), 13 commune committees (UC), 15 municipal consultative assemblies, and one park-wide committee (*Faitière*).

In 2022, WCF strengthened the capacities of 29 CVCDs and 13 UCs on the roles and responsibilities of committees, basic financial and association management, mechanisms for managing complaints and grievances, forestry legislation, and awareness raising techniques. Moreover, an annual work plan, and monitoring and evaluation tools were developed for the village committees to evaluate and improve their performance; 29 village committees were evaluated in 2022.

A complaint and grievance mechanism system is functional and integrated into the three committee levels. Fifty community members from the *Faitière*, UC, and CVCD received training in 2022 on this mechanism to reinforce the communication between the park and local communities, and 948 community members from 63 villages were explained the complaints and grievance mechanism procedures. In 2022, 30 complaints were received, of which 25 have been already resolved (including three from 2021).

The zoning plan of the MBNP was finalised in 2021 which has allowed for significant progress to be made in the territory natural resource management plans (VLMP, Village Land Management Plans) in 2022: (i) 11 participative maps were created in 2022 (total of 42), (ii) eight agreements with local communities on the protection and restoration of conservation priority zones were signed, and this step was accompanied with the collection of data related to impacted households, and (iii) eight VLMP and Income Maintenance Plan (IMP) documents were elaborated for the villages of Ley Kimbeli, Soulé, Yalagueta, Idia, Balagandé, Kolla 1/Kolla 2, Diaweya/Goubambé, and Tougui/Laba.

Moreover, remarkable progress has been made in 2022 on the governance and territorial planning of the 15 communes, with the revision and updates of the 15 Local Development Plans (PDLs; *Plans de Développement Local*) by the WCF. The 15 PDL now integrate both the activities and zoning plan of the MBNP.



*Participatory mapping exercise (left) and finalised participatory inter-village map (right)*

## 2.6. Socioeconomic development of communities

To date, **2,163 people** are organised into **72 cooperatives**, also called community economic interest groups (GIE, *Groupement d'Intérêt Economique*). These GIEs are benefiting from WCF's support to improve livelihoods in various sectors:

- 27 GIEs “vegetable gardening - shea butter” with 850 members including 773 women;
- 8 GIEs “vegetable gardening” with 403 members including 348 women;
- 5 GIEs “shea butter” with 163 members including 143 women;
- 15 GIEs “apiculture” with 267 members including 71 women;
- 16 GIEs “agriculture” with 462 members including 184 women;
- 1 GIE “agriculture – apiculture” with 18 members including 8 women.

Out of these 72 GIEs, 55 were legally approved in 2022.

### Vegetable gardening

During the vegetable growing season (from December 2021 to May 2022), WCF Guinea supported 462 fields in 29 villages. WCF provided technical, material, and training support to farmers to improve the quality and quantity of their production. The harvest this year consisted of 82.68 tons of onions (+438% compared to last year), 2.06 tons of eggplants, 2.68 tons of okra, 2.79 tons of pepper, 3.35 tons of tomatoes, 4.19 tons of potatoes, 47 kg of peanuts, and 192 kg of cabbage. Total group sales of vegetable gardening products reached 114,464,900 GNF (~ 13,310 USD).



*Collection of compost (left) and watering of a market garden field (right)*

### Agriculture

Given that fire has traditionally been used to clear agricultural fields following the slash-and-burn approach, a strong link exists between wildfire management and traditional agricultural activities. As a complement to NER efforts, which occur on uncultivated lands, the **Farmer-Managed Natural Regeneration (FMNR)** approach prescribes that a certain density of trees is maintained and/or regenerated in cultivated fields. Ninety-two FMNR fields, corresponding to 46.91 hectares, maintained by community members and from which **3,825 trees were preserved**, were supported by WCF in 2022. Harvest is ongoing at the time of writing the report, but consisted in 9.24 tons of peanuts, 6.1 tons of fonio, 2.1 tons of rice, and 541 kg of corn thus far.



*Crop maintenance of a FMNR field (left) and installation of a hedgerow (right)*

### Apiculture

WCF is currently supporting GIE members with the production of eco-responsible honey from Kenyan beehives. To date, the project has donated 330 Kenyan beehives to 14 GIEs, including 155 in 2022. Training on honey extraction techniques was provided to 187 members from 14 GIEs. So far in 2022, 476 litres of honey were produced from 30 eco-responsible Kenyan beehives and sold at the price of 16,660,000 GNF (~ 1940 USD), and 3,680 litres of honey were produced from traditional beehives and sold at the price of 92,000,000 GNF (~ 10,700 USD).



*Maintenance of an eco-responsible Kenyan beehive by GIE members*

### Shea butter production

A super cooperative composed of 32 cooperatives was established under the name of ‘*the cooperative of women shea butter producers of the MBNP*’ to better organise the shea butter production activity, and a tripartite commercial relationship was established between the members of the super cooperative; OKA Cosmetics (current shea butter buyer) and Ecocert (for organic certification of local products). In total, 683 community members including 558 women received training on different techniques to sustainably collect the shea nuts and to transform the shea nuts into shea kernels. One **multifunctional platform** was erected in Bamiko Woro, which is now used to process local products, including the shea butter. To date, **3.88 tons of shea butter** were produced from 10.90 tons of shea kernels (which were extracted from 110.30 tons of sustainably collected shea nuts). A total of 3,657 kilos of shea butter was sold at the price of 80,454,000 GNF (~ 9,620 USD).



*Celebration of women for the 2022 production of shea butter in the MBNP*

### Pastoralism and livestock programme

A pastoralism and livestock program was created to respond to the environmental degradation caused by overgrazing cattle, human-wildlife conflict (i.e. cattle killed by wildlife), and conflicts between agriculture and livestock farmers (i.e. cattle destroying agricultural fields). Three new cattle pens were erected in the park in 2022, which brings to date a total of five cattle pens for an estimated 1,210 head of cattle belonging to 93 livestock farmers. These cattle pens will serve as demonstration sites for neighbouring livestock farmers, who can replicate this practice. A training course was provided to 94 people on the causes and consequences of livestock straying in the park, the advantages of cattle pens, and cattle management (hay preparation, multi-nutritional salt licks, etc.). A second training session was organised for 38 WCF staff members on fodder collection, and processing and conservation techniques for feeding livestock in the dry season. The staff then trained 339 farmers, including 173 women, on these techniques in 13 pilot villages.



*Cattle pen in Yalagueta*

## 2.7. Awareness raising and education

After the successful implementation of new and improved outreach activities (*Cercle d'écoute* and theatre tour) last year, which reached thousands of people within the borders of MBNP, WCF continued in 2022 with these activities, in addition to the usual ones.

- ***Cercles d'écoute*** (“listening circles”): 54 focus groups in which people listen to and enter discussions on radio broadcasts created and communicated by WCF have reached 3,441 people (including 1,667 women) in 149 villages in 2022;
- **Theatre tour:** the troupe “*Club Culturel du Musée du Fouta*” was selected to conduct a fifth theatre tour in June, in five villages of MBNP (participation of 2,099 people) during which key messages on park management were shared (forest ecology, rain/water cycle, human-wildlife conflict, laws protecting endangered species, etc.);
- **Club PAN program** was implemented in ten schools and benefitted 900 children during the 2021-2022 school year.



*Theatre performance (left) and children benefitting from Club PAN (right)*

The WCF communications team developed other outreach activities using various communication channels such as TV, radio, and websites. In 2022, five TV and 35 radio programmes were broadcast, and 23 articles were published online (WCF website and social media). In addition, WCF created four short documentary films and shared them on YouTube, LinkedIn, and Facebook to reach broad audience: (i) development of the shea butter value chain and processing of shea butter in the MBNP, (ii) International Women’s Rights Day in Guinea, (iii) activities of the MBNP and the supervision visit conducted by the President and Founder of the WCF in February 2022, and (iv) WCF support to women onion producers in the MBNP. The World Chimpanzee Day was celebrated on 14 July in Labé to raise awareness on the critically endangered subspecies, and on the environment in general.



*World Chimpanzee Day celebrated in Labé*

As part of its community development strategy, the WCF built and donated a classroom and a teachers' office to the village of Taïbata. Moreover, 30 school desks and benches were constructed for the elementary school of Dakaciré, but have not yet been handed over due to the reluctance of the community towards the activities of the MBNP.



*The newly constructed school*



*A desk and bench crafted by the project*

### **3. Proposed Pinselli-Soyah-Sabouyah National Park**

In 2021, WCF, in support of the Guinean government initiated the creation process of the Pinselli-Soyah-Sabouyah National Park (PSSNP), located at the border with Sierra Leone in the regions of Mamou, Kindia, and Faranah, with a total provisional size of 3,029 km<sup>2</sup>. The future national park is part of the transboundary OKKPS – EU PAPFor project (Outamba-Kilimi and Kuru-Hills in Sierra Leone and Pinselli-Soyah-Sabouyah in Guinea) funded by the European Union, which aims to sustainably manage and protect the natural resources of this priority conservation landscape. The OKKPS project is led by WCF in collaboration with its national partner, the OGP NRF in Guinea, and Tacugama Chimpanzee Sanctuary (TCS), and the National Protected Area Authority (NPAA) in Sierra Leone. The proposed PSSNP has benefited from additional funding from USAID as part of the WABiLED programme, Arcus Foundation, Zürcher Tierschutz, and more recently Rainforest Trust, to reinforce the conservation efforts in this key conservation area.

#### **3.1. Creation of the Pinselli-Soyah-Sabouyah National Park**

The PSSNP project was launched and presented to all local stakeholders on 4 February at the Governorate of Mamou with the participation of 73 people including the executives of the MEDD, OGPRF, NDWF, and local authorities. Important progress towards the creation of the national park was then made with the signature of a **ministerial decree** for the creation process of the PSSNP on 12 September by the Minister of the MEDD. Moreover, the first consultation meetings (CC, *Cadre de Concertation*) with local communities and regional, prefectural and sub-prefectural authorities to present the PSSNP project and obtain **Free Prior and Informed Consent** were organised in the four communes of the future park (Soyah, Ouré Kaba, Madina Oula, and Marela), gathering a total of 107 people.

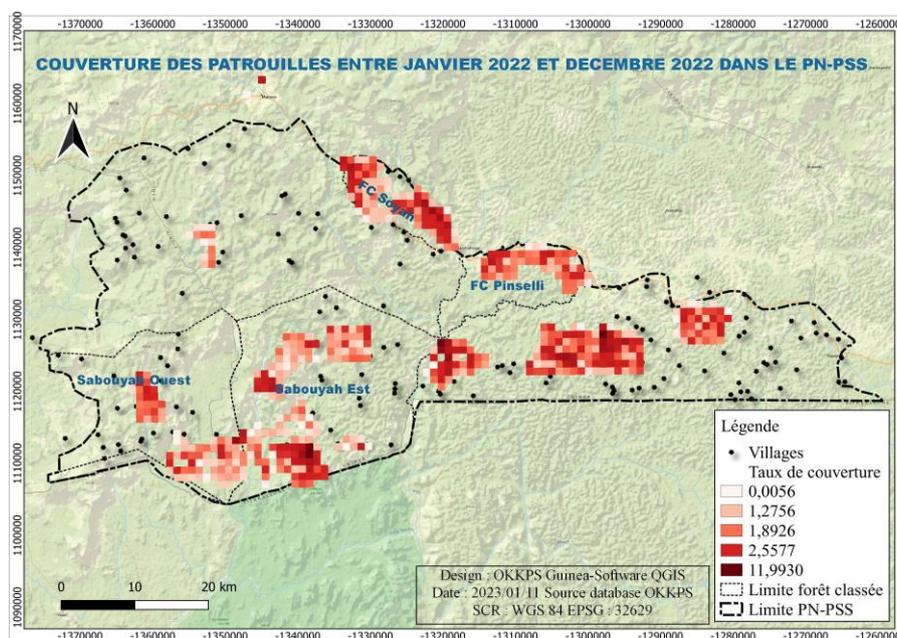
To date, 26 community ecoguards recruited by the WCF are dedicated to the PSSNP project, compared to only six agents from the OGP NRF. To compensate for this understaffing on the part of the national authorities, the WCF also works closely with the *Cantonnements*, the Brigade, and the regional inspectors and prefectural directors of the environment of Mamou, Kindia and Faranah.



*First consultation meeting in the commune of Ouré Kaba to present the PSSNP project*

### 3.2. Surveillance and law enforcement activities

**Eighteen patrols** led by teams comprised of mixed WCF ecoguards and OGPNRF agents (5-6 people per team) were conducted in 2022 in the proposed PSSNP, totalling 910.89 kilometres patrolled. A total of **2,656 observations of medium to large sized mammals** were recorded, from which 52 were direct observations of 25 different species. The common warthog (*Phacochoerus africanus*) was the species with the highest encounter rate (0.84 signs/km), followed by crested porcupine (*Hystrix cristata*, 0.28 signs/km), red river hog (*Potamochoerus porcus*, 0.16 signs/km), chimpanzee (*Pan troglodytes verus*, 0.14 signs/km), and African forest elephant (*Loxodonta cyclotis*, 0.09 signs/km). A total of **649 signs of illegal activities** were recorded: agriculture was the main threat (0.25 signs/km), followed by logging and traditional farming (0.08 signs/km), and by non-timber exploitation, and illegal settlements and camps (0.02 signs/km).



*Coverage and intensity of patrols conducted in the proposed PSSNP in 2022, with darker red colour representing grid cells with higher patrol efforts*

**Table 4.** Direct and indirect observations of medium to large sized mammals recorded between January and December 2022 during ecoguard missions in the proposed PSSNP.

N°	Common name	Scientific name	Dir Obs	Ind Obs	Total Obs	Enc. rate (signs/km*100)
1	Brush-tailed porcupine	<i>Atherurus africanus</i>	0	5	5	0.35
2	Marsh mongoose	<i>Atilax paludinosus</i>	2	3	5	0.35
3	Side-striped jackal	<i>Canis adustus</i>	0	10	10	0.70
4	African golden cat	<i>Caracal aurata</i>	0	3	3	0.21
5	Red-flanked duiker	<i>Cephalophus rufilatus</i>	0	128	128	8.97
6	Yellow-backed duiker	<i>Cephalophus silvicultor</i>	0	27	27	1.89
7	Sooty mangabey	<i>Cercocebus atys</i>	1	0	1	0.07
8	Campbell's monkey	<i>Cercopithecus campbelli</i>	4	5	9	0.63
9	Green monkey	<i>Chlorocebus sabaeus</i>	15	9	24	1.68
10	African civet	<i>Civettictis civetta</i>	0	6	6	0.42
11	Patas monkey	<i>Erythrocebus patas</i>	6	5	11	0.77
12	Hippopotamus	<i>Hippopotamus amphibius</i>	1	6	7	0.49
13	Roan Antelope	<i>Hippotragus equinus</i>	0	4	4	0.28
14	Crested porcupine	<i>Hystrix cristata</i>	2	402	404	28.32
15	Waterbuck	<i>Kobus ellipsiprymnus</i>	0	12	12	0.84
16	Serval	<i>Leptailurus serval</i>	0	1	1	0.07
17	African forest elephant	<i>Loxodonta cyclotis</i>	0	131	131	9.18
18	Western chimpanzee	<i>Pan troglodytes verus</i>	4	200	204	14.30
19	Leopard	<i>Panthera pardus</i>	0	1	1	0.07
20	Guinea baboon	<i>Papio papio</i>	6	40	46	3.22
21	Common warthog	<i>Phacochoerus africanus</i>	7	1,184	1,191	83.50
22	Maxwell's duiker	<i>Philantomba maxwellii</i>	1	55	56	3.93
23	Red river hog	<i>Potamochoerus porcus</i>	0	232	232	16.26
24	African buffalo	<i>Syncerus caffer</i>	0	31	31	2.17
25	Bushbuck	<i>Tragelaphus scriptus</i>	3	104	107	7.50
<b>Total</b>			<b>52</b>	<b>2,604</b>	<b>2,656</b>	

### 3.3. Law enforcement capacity building

Eleven **capacity-building workshops** were organised by WCF Guinea for different state actors and PSSNP teams in 2022:

- 1) Two **biomonitoring** training courses were organised in 2022: the first one was held from 3 to 14 February at the headquarters of the Outamba-Kilimi National Park in Sierra Leone for 21 WCF staff members and four OGPNR agents, and the second from 7 to 10 November in Labé for 21 WCF staff members and eight OGPNR agents. These two courses focused on data collection, camera traps, line transects, species identification, data management, video storage and analysis, and a statistical course, all with the goal to make WCF and OGPNR agents operational and proficient in surveying the PSS landscape.
- 2) A series of five workshops was organised on **patrolling techniques** (GPS, CyberTracker, SMART, species identification, etc.) for WCF community ecoguards and field officers, and OGPNR agents. The goal of these workshops was to render the law enforcement agents operational and proficient in the surveillance and management of natural resources.

- 3) A **law enforcement** capacity-building workshop was organised from 1 to 4 November in Mamou for 26 state agents. The objective of this workshop was to (i) increase the knowledge and understanding of the Fauna and Flora codes, and hunting and logging regulations, (ii) train agents in the techniques and procedures of arrest operations, confiscations, prosecutions, and legal follow-up, and (iii) present the codes of conduct of park rangers.
- 4) Two workshops on **protected area monitoring and evaluation** were organised in April and July for 17 and 15 participants respectively, including the heads of other Guinean protected areas. The objective of these workshops was to present the results obtained each quarter in the proposed PSSNP, and to highlight the difficulties encountered to formulate recommendations to improve management efficiency.
- 5) From 22 to 27 August, the first **evaluation of the management efficiency** of the future PSSNP was carried out at the WCF headquarters in Conakry using the IMET tool (*Integrated Management Effectiveness Tool*), and involved 14 people. The proposed PSSNP obtained an efficiency score of 33.07% for the first year of its creation phase.



*Workshop on law enforcement in Mamou (left) and IMET workshop in Conakry (right)*

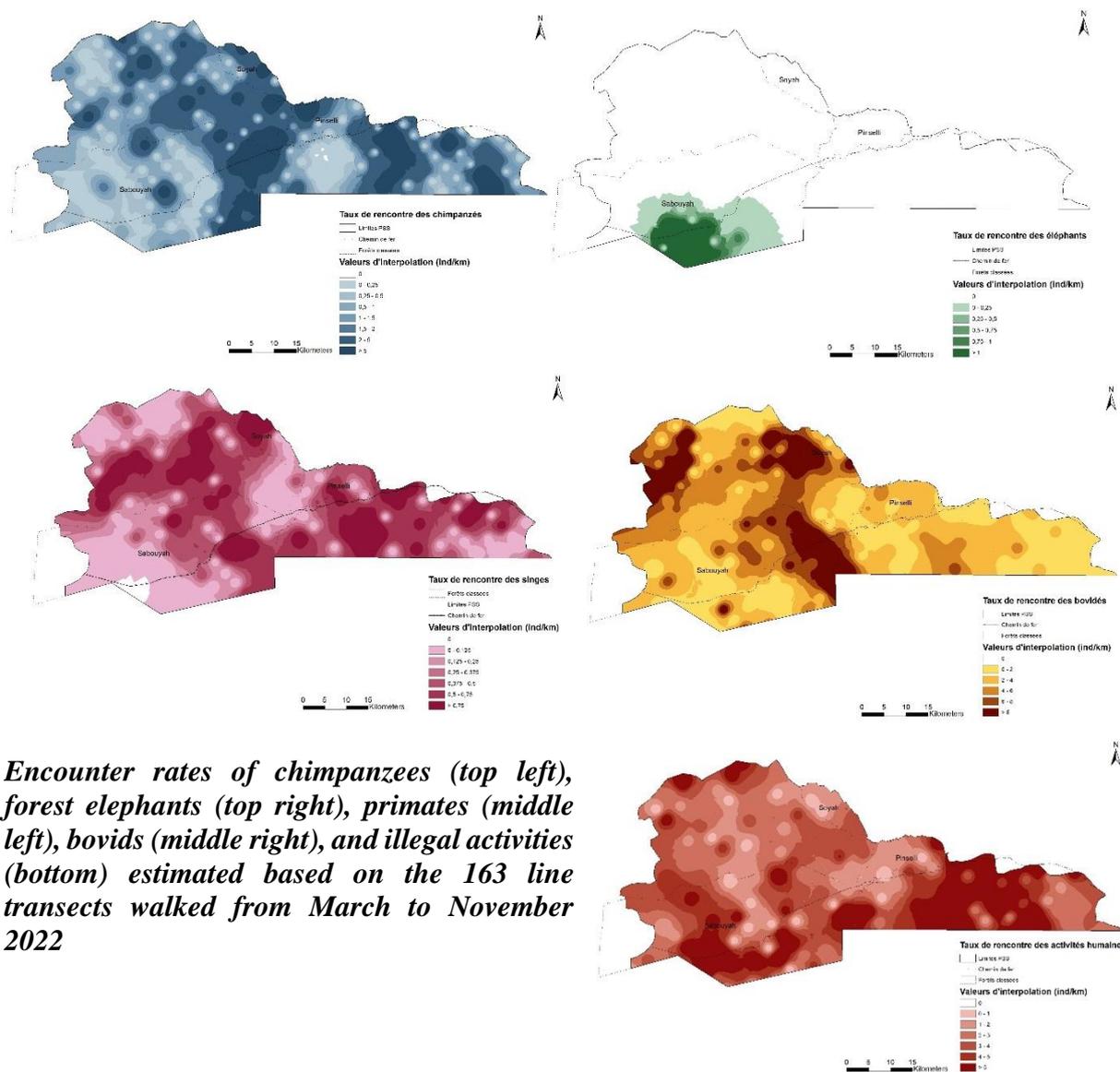
### 3.4. Wildlife biomonitoring

A biomonitoring survey using the method of systematic linear transects and standardised camera traps was conducted from March to November 2022, with the objective to gain baseline information, and confirm the conservation value of PSS area. Follow up surveys will be conducted every year to be compared with the present baseline information collected in 2022, and this will allow us to determine the stability of key species populations, i.e., if they are increasing or decreasing. Mixed teams of WCF community ecoguards and OGPNRF agents walked **163 line transects** and installed **262 camera traps** across the PSS landscape.

We discovered a population of critically endangered African forest elephants ranging across the border from Outamba to the Sabouyah area. This population was previously unknown in Guinea and represents the second, and largest population of this species in the country, and potentially being the only population with a real chance of survival.

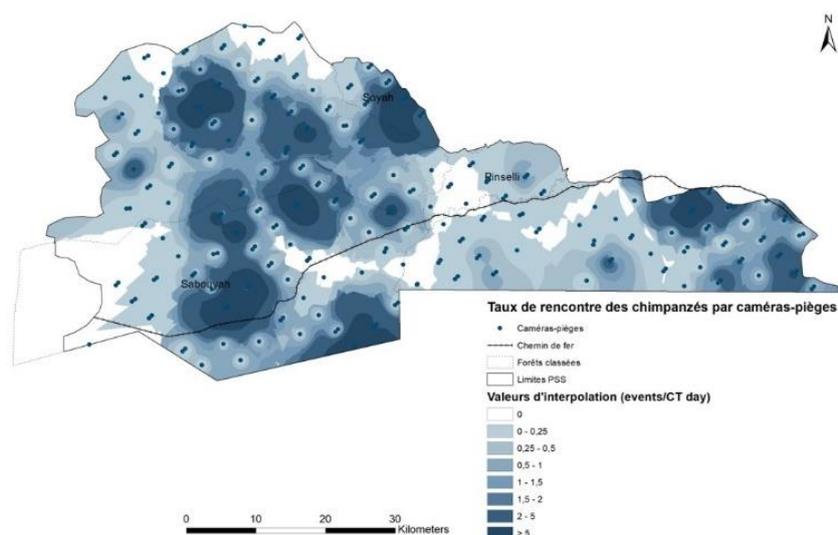
Based on the 163 line transects, the encounter rates of the western chimpanzee (*Pan troglodytes verus*), African forest elephant (*Loxodonta cyclotis*), primate species, bovid species, and anthropogenic activities were estimated as follow:

- Western chimpanzee: 2.45 signs/km (377 observations);
- African forest elephant: 0.21 signs/km (34 observations);
- Primate species: 0.43 signs/km (136 observations);
- Bovid species: 4.03 signs/km (652 observations);
- Anthropogenic activities: 3.71 signs/km (603 observations).



*Encounter rates of chimpanzees (top left), forest elephants (top right), primates (middle left), bovinds (middle right), and illegal activities (bottom) estimated based on the 163 line transects walked from March to November 2022*

Of the 262 camera traps installed by the field teams, 250 were retrieved (five camera traps were stolen, and in seven the data was unable to be extracted, due to faulty SD cards) and recorded a total of **82,320 videos**, of which **284 were videos of western chimpanzees**. All videos were then analysed using the Zamba software, an innovative video processor that ensures rapid and precise automated analysis of videos. So far, 2,566 distances were estimated from 146 videos of the 284 videos of western chimpanzees.



*Encounter rates of chimpanzees from camera traps*

### 3.5. Implementation of a mitigation strategy along the future railway line

The proposed PSSNP is under intense pressure due to railway construction plans connecting the Simandou iron ore mines with a harbour south of Conakry. Within the proposed national park, the railway line will be 160 kilometres long, including four tunnels (around 28 km long) and 43 bridges (around 23 km long). The railway construction commenced in early 2021, long before the approval of the Environmental and Social Management Plan (ESMP), and with no implementation of avoidance and mitigation measures. WCF with the MEDD has been extremely active in exchanging with the railway constructors and future users (Winning Consortium Simandou - WCS and Rio Tinto) to have them significantly increase investment into mitigating their negative impacts.

On 31 May, WCF in collaboration with the Guinean Agency for Environmental Assessment (AGEE), and the OGP NRF organised a workshop in Conakry to develop a **cohabitation strategy between projects of development and conservation** in the PSS landscape, with the participation of 43 people (including executives from the MEDD, WCSR, and Rio Tinto). A second workshop was held in Coyah on 20 to 21 December to (i) present the impacts of the railway construction on biodiversity, forest cover, and human immigration, (ii) **evaluate the mitigation strategy** implemented by WCSR so far, (iii) develop the 2023 operational plan of the ESMP, and (iv) set up a steering committee (participation of 34 people, including the MEDD, WCSR, and Rio Tinto).

The WCF has been very active to control the implementation of the ESMP and mitigation measures through the conduct of monthly field visits resulting in a list of recommendations for both mining companies and the MEDD, and the identification of efficient mitigation measures to be implemented (such as under/overpasses at watercourses). Moreover, a biomonitoring survey was conducted (to be repeated every three months) using the method of systematic line transects on either side of the railway and maintenance road verges, to evaluate the impacts of their construction on the abundance and density of wildlife, and especially on forest elephants and chimpanzees. Results show that the number of chimpanzee nests increases with the distance from the railway line/ maintenance road, while, the number of illegal activities increases with proximity to the railway line/ maintenance road.



*Workshop organised in December 2022 to evaluate the mitigation strategy of the railway construction works in the PSS landscape (left) and field visit at the construction site by WCF in collaboration with WCSR (right)*

### 3.6. Socioeconomic development of communities

From February to June 2022, WCF Guinea conducted a **socioeconomic study** in the proposed PSSNP to assess communities' needs, with 448 households surveyed in 36 villages. Data are currently being analysed and a detailed report will soon be available.

Using the same approach as the MBNP project, WCF organises community members of the proposed PSSNP into cooperatives (GIE, *Groupement d'Intérêt Economique*) to support economic and sustainable activities that do not destroy the environment. To date, **829 people** are organised into **21 cooperatives** as follow:

- 7 GIEs “vegetable gardening” with 326 members including 145 women;
- 8 GIEs “agriculture” with 286 members including 127 women;
- 6 GIEs “apiculture” with 217 members including 61 women.

#### Vegetable gardening and agriculture

The vegetable gardening and agriculture activities were launched at the end of 2022 to prepare for the 2023 agricultural campaign as follows:

- 1) Training on **sustainable agro-ecological practices** was organised in Soyah and Madina Oula by WCF from 8 to 13 November for 133 members (including 59 women) for agricultural cooperatives from 14 villages. During this training, people were made aware of the importance of sustainable natural resource management for their livelihoods, introduced to different agro-ecological techniques (composting, erosion control measures, biopesticides, etc.), and they learned about conservation and valorisation of agricultural products.
- 2) A field mission was organised from 6 to 14 December to select the sites that will be supported in 2023 for market gardening and Farmer-Managed Natural Regeneration (FMNR). In total, **7 market garden fields** (total of 6.58 ha) and **6 FMNR fields** (total of 6.35 ha) were identified.



*Training on agro-ecological techniques in the PSS landscape*

### 3.7. Awareness raising and education

WCF has implemented outreach activities based on the Moyon-Bafing National Park model such as:

- ***Cercles d'écoute*** ('listening circles'): seven focus groups in which people listen to and enter discussions on radio broadcasts created and communicated by WCF have reached 207 people (including 80 women) in 34 villages. This year the *cercles d'écoute* focused on wildfire management.
- ***'Picture box' awareness sessions***: 36 sessions were conducted in which 1,336 people (including 614 women) in 35 villages were sensitised on illegal logging (n = 124), the negative consequences of wildfires and their management (n = 649), and sustainable agro-ecological practices (n = 563) using picture boxes as a pedagogical tool.



*Awareness session on wildfire management using the "picture box"*

In addition, the WCF communications team developed other outreach activities using different communication channels as follows: **seven TV broadcasts** were released (two on the national TV "RTG" and five on the private TV "Espace"), **15 radio programs** were broadcast (on "Fraternité Mamou" local radio), **15 articles** were published online (WCF website and social media), and **five videos** (including two short documentaries created by the PAPFor communication team) were shared on WCF YouTube page.

Awareness materials were also created such as: (i) **32 community signboards** about the base camps of the project, illegal logging, wildfires, fully and partially protected species in Guinea, and wildlife of the OKKPS landscape, (ii) **50 OKKPSS t-shirts**, (iii) **eight picture boxes** on illegal logging, poaching, wildfires, and agroecology, (iv) **two banners**: one for the workshop organised at the MEDD in May 2022, and one for the workshop organised in Coyah in December 2022, and (v) **eight radio broadcasts** on wildfire management and agro-ecological practices in French, Poulhar, Malinke and Sousou languages.

#### **4. Acknowledgements**

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